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ARTICLE I.

Pathology and Treatment of Irritation—Local, Sympathetic and Constitutional. By N. R. SMITH, M.D. Professor of Surgery in the University of Maryland.

(Concluded from page 104.)

54. FOREIGN bodies lodged in sensitive parts are a fruitful source of constitutional irritation, as well as of inflammation and symptomatic fever. Foreign substances lodged in the nasal cavities, or in the auditory passages, especially in children, sometimes give rise to convulsions. It is well known to surgeons, that, in alarming epistaxis, when it becomes necessary to plug both the posterior and anterior nares, and the nostrils thus become stuffed with coagula, so severe does the irritation become from their presence, and the distension which they create, that convulsions often result, and it becomes necessary to withdraw the plugs. A catheter introduced into the bladder, and left in the urethra for the continued evacuation of the bladder, often creates disturbance which compels us to withdraw it.

55. Mental emotions, when intense, do sometimes, as has already been remarked, so electrify the nervous system as to fatally break up the correlative action of important organs. They produce sudden depression of the powers of life, and cause a fatal result without inducing any pathological state which can be denominated fever. Instances in which terror, in persons of but little physical or moral firmness, as children and females, has

caused protracted convulsions and death, frequently fall under the observation of physicians. More generally, however, where we witness the injurious effects of moral causes, it is the more insidious influence of despondency which is the source of evil. This merely acts to aggravate the effect of some other source of constitutional disturbance. A foreboding of evil in the mind of the patient, in the contemplation even of trivial surgical operations, always causes anxious solicitude with the prudent surgeon, since death has often been observed to result under such circumstances. The same cause will of course influence recovery from accidental injuries.

56. In the summer of 1829, a patient from the country entered the Baltimore Infirmary, for the cure of a stricture of the urethra, accompanied with fistula. The stricture existed near the middle of the spongy portion of the urethra, and was accompanied with but little irritation of the bladder, and no constitutional disorder. He came to the house, however, with the most melancholy apprehensions, and, notwithstanding the most encouraging statements which were made to him of his case, persisted in expressing his conviction that he should never leave the house alive. I performed an operation, which consisted merely in dividing the stricture with a stroke of the knife, and introduced a gum-elastic catheter into the bladder, and suffered it to remain. Several days elapsed before any thing unpleasant resulted, though the same foreboding continued. At length, without any considerable irritation of the urethra or bladder—without any premonition of any kind indeed, there took place a sudden sinking of the powers of life, and in a few hours, in spite of every endeavour to save him, he died, still uttering the conviction that this was his inevitable destiny.

TREATMENT OF PRIMARY CONSTITUTIONAL IRRITATION.

57. *Treatment of Constitutional Irritation from Local Injuries.*—It will be borne in mind, that the symptoms which characterize constitutional irritation from local injuries, are those which indicate a subdued and disturbed state of the vital forces, and that re-action is the first evidence of any recuperative effort on the part of nature, and the first step toward recovery. To rouse the subdued powers of life then, and to bring them under the influence of more salutary stimuli, would appear to be the first general indication to be had in view. Assuming the patient's condition to be that which has already been described, arising from injury

received by a fall from a height, or in a mode equivalent, his breathless, pulseless and pallid condition demands repose in the horizontal posture, warmth, and the employment of gentle stimulants. If the surgeon be at hand at the moment of the injury, his first object should be to prevent all officious interference on the part of by-standers, whose well-meant endeavours are so usually misdirected. If he be not exposed to a cold or damp air, nor lying upon a wet or rugged surface, let him, for a few minutes, rest where he is, in the supine posture, which is easiest for respiration; and with his head low, to favour the restoration of the cerebral circulation, the suspension of which prolongs the state of syncope. If his immediate removal be necessary, he should be placed on a hand-barrow, or a plank covered with a folded blanket, still in the horizontal posture, and conveyed in a manner to embarrass his respiratory efforts as little as possible, to the nearest dwelling. He should be placed in an apartment where the circulation of air is free—warmth, by heated bricks or bottles of water, is to be immediately applied to his feet—and, by warm cloths, to his stomach and region of the heart. Gentle frictions with warm dry cloths, are to be exercised, and if re-action is still reluctant, let the lips and nostrils be touched with ammonia—with Cologne water, or with warm spirits. A dash of cold water upon the face will produce a deep inspiration, and thus give an impulse to the circulation.

58. To exhibit any remedy by the mouth, while extreme prostration still exists, will only produce ineffectual efforts to swallow, and still more embarrassed respiration; but when respiration and partial consciousness are established, nothing is so grateful to the patient—nothing so refreshing, as a draught of cold water. For this, indeed, as soon as the patient is conscious of his wants, there is the most eager desire, which instinct should always be gratified. But if we have reason to believe that no serious lesion has been inflicted upon important organs, especially the brain, and if re-action is still tardy, it is proper that warm wine and water, toddy, or a few drops of aqua ammoniæ should be administered.

59. One of the most common and pernicious of popular errors, (in this community at least) in regard to the treatment of cases such as I have described, is the conviction of the necessity of blood-letting. So impressed are the by-standers, with this belief, that the attempt to obtain blood is often made by some intermeddler, before the case is seen by the surgeon; and if not, the latter is always importuned to use the lancet. The impropriety of

resorting to it under such circumstances, is now, I believe, among surgeons, universally acknowledged. Fortunately, when the attempt is made, it ordinarily fails, in consequence of the languor of the circulation; but, could blood be copiously taken, it would only have the effect, either to defer, or perhaps altogether discourage the recuperative efforts of nature.

60. When, however, re-action has become established, and especially when it has been excessive, blood should always be taken in cases in which the shock has been considerable, or where organic injury has been inflicted upon any important part. Even although re-action may have been at length established, and some degree of inflammation and fever induced, the agitation of the nervous system and the morbid exercise of sympathy, by no means necessarily ceases. Vicissitudes of action and unequal excitement are liable still to occur. Perfect tranquillity should be enjoined, and usually it will be proper to compose the system by means of an anodyne. But the more promptly we may have cut short the period of primary irritation, the less serious will be the consecutive vascular and nervous derangement. These pathological states, indeed, bear to each other a relation analogous to that which exists between the cold and hot stages of an intermittent.

61. To avoid reiteration, we must necessarily defer the consideration of that variety of constitutional irritation resulting from burns, until we shall treat particularly of these injuries. I would remark, however, that those therapeutic principles which apply to other forms of irritation, are applicable here also, and we shall find the treatment of burns to be illustrated by that which we are now inculcating.

62. When constitutional irritation results from the action of a blister, spontaneous re-action would ordinarily soon result; but the affection is distressing, and to the patient alarming—sometimes, also, seriously protracted. It therefore demands our attention. The effectual remedy is a liberal anodyne in the form of tinct. opii, aided by external warmth and hot drinks, which dispel the more quickly the chill that usually accompanies the paroxysm.

63. I would here remark, that in all those cases in which the cause of irritation is for a time continued, and this pathological state in a degree protracted, narcotic anodynes are the legitimate antagonists of irritation, which they meet and neutralize in the nervous system. They constitute by far the most important

class of our remedies; for, although they generally, more or less excite the vascular system, they certainly obtund the sensibilities of those tissues on which irritants primarily act, and especially those of the nerves. They also, by their general influence on the nervous system, arrest the morbid exercise of sympathy, and the communication of disease from one organ to another, or to the system.

64. In regard to constitutional irritation from surgical operations, we have an advantage not enjoyed in the treatment of other forms, since we may often anticipate its occurrence, and, in a degree, fortify the system against it. We also have it often in our power to select that period in the progress of the local affection propitious to the success of our operations; but this topic we shall discuss more fully under the head of amputations.

65. When we are about to execute a surgical operation of even trivial magnitude, upon a sensitive subject, it is prudent to administer thirty or forty drops of the tinct. opii, a few minutes before its execution. If the operation be one of formidable character, twice that quantity may be employed, care being taken to ascertain whether there exist any idiosyncrasy forbidding its use.

66. We are often importuned by those about to suffer severe operations, to render them insensible to pain by powerful narcotics. Immediate suffering might thus, it is true, be partially obviated, but we are well aware that the secondary effects of opium are productive of cerebral engorgement, and general irritability, circumstances extremely unfavourable to the happy results of most surgical operations.

67. The horizontal posture is that in which a patient best endures the infliction of pain, and when possible, this should be employed. I have recently couched the eye of a gentleman, who had been previously thrice operated upon by an intelligent surgeon, who placed him in the usual sitting posture. After each operation, he had been immediately seized with tremors, sense of faintness, and vomiting, which greatly distressed the wounded organ, and probably assisted to defeat the complete success of the operation. Warned by these occurrences, I followed the advice of Dupuytren, and in operating on this gentleman, placed him in the recumbent posture on his bed, so that no locomotion was necessary after the operation. In the first instance, he completely escaped all unpleasant symptoms, and in the second, they were slight, and did not occur for some hours, and not till he had become a little exhausted by incautious exertion.

68. In operations necessarily protracted and painful, the prudent surgeon will, when practicable, give his patient the occasional respite of a moment from his suffering, in order to give the vital powers an opportunity to rally. An intelligent physician, on whom I recently performed lithotomy (in whose case there was peculiar difficulty, because the calculus was encysted,) assured me that but for these moments of comparative rest, he must have lost all power of endurance, and perished on the table. At these moments the patient should also be allowed cool water, or wine and water. He should be cheered by the sustaining voice of hope, and assured of speedy relief. The operation should be performed with as much celerity as is consistent with precision. From time to time the pulse should be examined, and should it at any moment give evidence of extreme prostration, the operator must desist, if possible, till re-action is in some degree induced.

69. Should extreme pain persist, after a surgical operation, a liberal opiate (tinct. opii f. ʒ i, to an adult) should be immediately administered, lest the continuance of local irritation should further disturb the constitution. To preclude the occurrence of chills, such as often follow from severe, and in some, from slight operations, an anodyne may be given, the extremities be kept warm, and warm drinks be exhibited.

70. Constitutional irritation, induced by great loss of blood, furnishes a case of most perplexing character for the management of the surgeon. There is exhaustion, and yet there is at times over-action;—we wish to increase the power to sustain, and yet we would sedulously avoid to increase action. At one moment the arteries bound with an apparent force, which will sometimes tempt the young surgeon to resort to the lancet;—at another moment, their faint pulsations seem to demand the use of the most diffusible stimulants. These are both deceptive indications. In such a case, two objects are to be held in view; the first—to restore and sustain power; and the second—to obviate irritation, which is exhausting it by compelling it to excessive action. In all such cases there is some focus of irritation, or debility alone would be the consequence of loss of blood. The philosophical plan of treatment would therefore appear to consist in the judicious employment of anodynes, revulsives, corroborants, and in the use of nutrient, but unirritating aliments, and the careful avoidance of all moral and physical excitants. It is also highly important that the tendency to unequal excitement should be obviated by the suitable employment of local sedatives and stimulants, particularly cold and warmth.

71. Opium employed under these circumstances, exhibits far less of its stimulating influence than ordinarily. The occasionally increased action of the pulse, is owing, not to permanent excitement in the heart and arteries, but to irritation, of which opium is the legitimate antagonist, and no sooner is a full anodyne exhibited, than the tumult of vascular action is assuaged. The salts of morphia will generally be found more salutary than opium. An idiosyncrasy might forbid the use of either, and then digitalis, or the extract of hyosciamus, may be employed.

72. The tonics resorted to, should be those which are but little stimulating, and which act especially on the stomach. Bitter vegetable infusions will, therefore, be selected, such as those of Columbo, quassia, &c. also the sulphate of quinine, in small doses. Preparations of iron are, perhaps, second to none in value. Porter, in small quantities, will often be found most salutary, by virtue of its anodyne, its tonic, and its nutrient qualities.

73. The secretions being defective, and often morbid in these cases, and the bowels usually slow, the pil. hydr. with rhubarb or aloes, will be found a salutary aperient. Harsh cathartics must be carefully avoided, for if gastro-enteric irritation do not already exist, it is easily induced.

74. Nothing can be more important in the management of these cases, than the observance of the most perfect tranquillity. Even the eye and ear should be placed at rest, by the absence of light and sound. So excitable is the nervous system, and especially the optic and auditory portions, that ordinary noises and light will alone keep up a perpetual excitement. I have recently treated a case of constitutional irritation from exhaustion, in which such was the exquisite tenderness of the eye, though there existed no evidence of inflammation, that not only was it necessary to completely darken the room, but also to use a close screen over the eyes.

75. Whatever plan of treatment is pursued, however, it must be chronic, like the disease, and recovery must necessarily be slow and tedious.

76. The reader will observe that I have merely taken that view of this part of our subject which is most interesting to the surgeon. For more particular information, I must refer him to the writings of Marshall Hall and Mr. Travers. I would here remark, that when the febrile symptoms strongly qualify irritation from loss of blood, the case becomes one of irritative fever, and will be briefly discussed in its proper place.

ARTICLE II.

Contributions to Pathology, consisting of a Report of Cases which occurred in the Baltimore Infirmary, with Remarks. By the EDITOR.

THE following cases are chiefly interesting on account of the extent of the organic lesions discovered after death, and the physiological and pathological inferences which may be deduced from them. In relation to therapeutics, they afford but little practical interest, except so far as the total inadequacy of remedies to effect any material amelioration of the sufferings of the individuals may be considered important. On this account, all details of treatment are omitted in some of them, and only such remarks offered, as are suggested by the relations of the respective cases to physiology and pathology. In these respects, each one of them presents several points of interest, and deserves to be attentively analyzed. It is indeed only by generalizing upon facts of an analogous character, that those fundamentable and immutable principles can be established, which we may hope will, at some future day, reduce medicine to the condition of a fixed and positive philosophy, free from the vague and bewildering hypotheses by which it has been so long encumbered, and which still continue to retard its progress and detract from its usefulness. Pathological anatomy has already yielded many rich treasures, which have contributed greatly to the improvement of medical science; and cultivated with a proper spirit, it is capable of unfolding, daily, some new principle, to be added to the common stock, and which united the valuable facts elicited by the careful and diligent clinical observations for which the present age is so remarkable, cannot fail, sooner or later, to bring about the important consummation to which we have adverted above.

Within the last thirty years, the whole mode and tenor of medical investigations have undergone a complete revolution. The new and inexhaustible mine laid open by the great Bichat, in the creation of the science of general anatomy, has gradually alienated the attention of medical philosophers from their blind and exclusive attention to the hidden and impenetrable mysteries of vitalism, and in proportion as it has become fixed upon the rich domain of structural anatomy, illustrated as it has been by a careful observance of vital phenomena, their investigations have been submitted to the guidance of the rules of induction, and

conducted them from an observance of isolated facts, to the establishment of those legitimate conclusions, which are the logical sequences of a true philosophical analysis. Minute anatomical structure must be the starting point of all physiological and pathological researches; and it is just as impossible for an individual who is devoid of this preliminary knowledge, to reason correctly upon the complex operations of the vital economy, or to understand the intricate physiological and pathological laws of the living machine, as it would be for one who is ignorant of the arrangement of a complex piece of mechanism, to comprehend the principle of its action, or to adjust its different parts, in that order which is necessary to enable them to co-operate in the production of those results, which it is their office to fulfil. We repeat, therefore, that an accurate knowledge of minute or structural anatomy is the only key to physiology and pathology; and it is only after the mind has been enlightened by this indispensable prerequisite, that it can be qualified to comprehend the mysteries of the vital economy, and to contemplate, with any fruitful results, the complex and diverse functions by which our existence is preserved, and those derangements and perversions of their natural harmony, which are developed amongst them by the influence of physical and moral agents.

While, therefore, structural anatomy should constitute the inception of our investigations, the next step, after we have carefully analyzed the texture of every tissue and organ, is to determine their respective vital endowments; to ascertain their comparative susceptibilities to the same, and to different impressions—to investigate carefully the series of acts by which each one accomplishes those general purposes or functions for which it is intended; and, finally, the reciprocal influences and dependencies which we perceive operating between the entire series, or particular parts of the series, through the intermedium of the chain of sympathies by which all the parts are associated.

By these steps, we are conducted to a knowledge of the laws of the healthy living system, as far as it is allowed us to comprehend them; and having advanced thus far, we can, by a similar mode of investigation, arrive at an acquaintance with the pathological laws which operate in the developement of those perversions and alterations of the healthy structures and functions, under the agency of the preternatural influences to which the organism is exposed. Knowing the texture and vital endowments of the different tissues, we are prepared to appreciate the

alterations to which the one is liable, under the influence of the derangements impressed upon the other; and we thus pass from the study of healthy, to that of diseased structure;—from the contemplation of healthy or physiological acts, to the observance of those which are abnormal or pathological. We investigate each step of the transition from the one to the other, and as an ultimate result, arrive at a knowledge of those laws of pathological physiology, which are a natural sequence of a philosophical investigation of the conjoint static and dynamic phenomena of the animal economy in health and disease, and which alone can furnish a safe and certain basis for our system of therapeutics.

It is this that constitutes the principal distinguishing feature between the anatomy of the present day, both healthy and pathological, and that which was the object of the study of our ancestors; it is this which has impressed a new character upon modern physiology—created, as it were, anew, the whole science of pathology, and even extended its ameliorating influence into the domain of therapeutics. Before the time of Bichat, anatomists confined their attention chiefly to the form and relations of the organs—the mere external configuration, size, and connections of the different parts, bestowing but little attention upon their intimate texture, and with a few exceptions, neglecting that minute and elaborate analysis of structure, which has since been so fruitful in improving the condition of the science. A knowledge of the forms, relations, and connections of organs is unquestionably valuable to the surgeon, in enabling him to understand the nature of the physical lesions which he has to treat, and in furnishing him lights to guide his hand in the performance of surgical operations; but it is equally clear, that such information is of comparatively little value to the medical pathologist: his investigations are not restricted to external qualities; "they must fathom the depths of the organization, and attach themselves, as it were, to the substratum of the organs and tissues, and their internal arrangement."

But this truth, self-evident as it is, does not seem to have been so generally admitted, as its importance deserves. Notwithstanding the important revolution that has been effected in the method of studying and teaching anatomy, there are still too many, who adhere blindly to the old routine, and instead of directing their attention to those investigations, which are calculated to render their labours a fruitful source of instruction to those for whose edification they are specially intended, content themselves with a

tedious enumeration of forms, and prominences, and foramina, and insertions, which the student can seldom remember, and if he could do so, would never be able to apply them to any useful purpose. And these are the persons who decry general anatomy! who discourse learnedly about the necessity of giving to lectures a *practical* character, and by a specious sophistry, divert the minds of their pupils from that train of investigation, which is indispensably necessary to make them either good physiologists, sound pathologists, or successful practitioners.

But lest we should be charged with attaching an undue importance to those pursuits to which we have been ourselves devoted, and condemning too strongly the course of those who possess different sentiments, we shall allow one to speak, who cannot be accused of being influenced by such a bias. A writer in the *Medico-Chirurgical Review for January*, 1835, p. 138, holds the following language in reference to this subject:

"It is impossible for any who are conversant with the method of teaching anatomy now practised in the *best* metropolitan schools, to avoid perceiving the great alteration which that method has experienced in the last few years. Mr. Abernethy, we believe, was the first to adopt a slip-slop mode of lecturing, in which minute and rigid demonstration was sacrificed, and a very superficial description of anatomy was patched and garnished with trimmings of physiology, pathology, and therapeutics. The lecturers of the Abernethian school resembled very closely that liberal cook, who offered for three-pence, a dinner consisting of 'roast and boiled.' He kept his word; but, when the covers were removed, potatoes were the only dish.

"The abandonment of minute anatomy, and the association of pathology and surgery along with it, offered a short cut and an easy path to the deluded student. The lecture-room and manual were occupied alike with his very promising and very profitless species of instruction. Much was said, but little taught; and if the student had not the fortune to be made a jack of all trades, he certainly was not a master of anatomy."

A better picture of the practical lecturers on anatomy of the present day, could scarcely be drawn, and we regret to say, that the American, as well as the British schools of medicine, still abound with too many examples to which the likeness will apply. Would we could hope for the consummation of the sentiment expressed by the able writer just referred to—that "such lecturers will be shunned as idle praters or absolute impos-

tors, and that the race of *fainéants* must quickly disappear." We would most cheerfully join with him in his benediction, "peace to their manes!" as we do in the belief, that "they belong as certainly to a former age, as if they had been born two centuries ago."

Unfortunately, this faulty method of investigation is not confined to the domain of healthy anatomy. It has also spread its blighting influence over pathological anatomy. There are few physicians of the present day, who question for a moment the importance of the study of organic lesions; but while a large number of them direct their attention to such pursuits, too many seem to think they have achieved all that is necessary, when they have discovered some change of colour or texture, or some alteration of the form, size, or situation of an organ, and pass by unnoticed the intimate modifications the tissue has undergone, the changes of the vital powers which have been instrumental in producing them, and the functional disturbance awakened by them in the several organs, during the progress of their development. The mere outward form and appearance of organic lesions is of no more practical importance than the outward forms and appearance of the healthy organs. It is only when they are rigidly analyzed—when they are reduced, as it were, to their elements; and, especially, when they are considered in relation to the vital or dynamic powers by which they are induced, and with which they are associated, that they acquire a practical value; because it is only when investigated in these relations, that they associate themselves with pathological physiology—the ultimate object of all such investigations, and the only one that can aid in attaining a knowledge of the characters and treatment of diseases.

It may be thought that these observations are foreign to the objects of this paper. We have made them, because they represent the spirit which we constantly desire should govern us in our investigations; or, in other words, our confession of faith, in relation to pathological inquiries. They will serve to explain the reasons for some of the reflections which we may have occasion to make as we proceed, and furnish an excuse at least, for discussions, which may be considered by some, as out of place. They represent the spirit of analysis which we shall attempt to apply in the following cases, and we shall now proceed to detail them without further comment.

CASE I. *Necrosis of the metatarsal bone.—Operation, succeeded by irritability of the stomach and intense jaundice.—Death.—Cancer of the duodenum, obstructing the ductus communis choledochus.—Cancerous matter filling and obstructing the vena portæ.—Extraordinary dilatation of the excretory vessels of the liver, and extensive disease of that gland.*

Thomas Power, seaman, was admitted into the Baltimore Infirmary, March 31, 1835, on account of necrosis of the metatarsal bones. He had remained in the institution some time, on a previous occasion, for the same affection, at which time an operation was performed by Professor Smith, for the removal of a portion of the diseased bone. At the period of his second admission, he fell under the care of Professor Hall, who made an incision with the object of removing the necrosed bone, but finding it adherent, desisted from any further attempts to effect its removal. He became very much depressed during the operation, and was seized next day, with alarming irritability of stomach, and incessant vomiting and purging. There was no pain or tenderness on pressure in the epigastric or hypochondriac regions, nor any symptom indicating inflammation of the first passages, except the dejections by vomiting and stool. The pulse was feeble, waving, and almost indistinct in its beat; and not more than forty-five in a minute. The tongue was red on the borders, and heavily coated with a dark fur in the middle. The alvine evacuations were dark, watery, and fœted: the temperature of skin was but little elevated above the natural standard. On the third day, universal jaundice supervened, but no marked change of the other symptoms took place. The irritability of the stomach was combatted by effervescent soda powders, and he was directed to take a pill, composed of two grains blue mass, and half a grain of opium, four times a day.

April 4th. The general jaundiced state of the skin is somewhat diminished: the fur of the tongue is whiter and of a cheesy appearance, and the stools are of a pale colour, very offensive, and of a clayey consistence. The pulse remains the same—treatment of yesterday continued.

5th. The intensity of the jaundiced hue has returned; pulse somewhat more frequent and weaker; strength reduced; feels very much oppressed. Same treatment continued, with a small quantity of brandy toddy through the day.

6th. Great prostration of strength, but experiences no pain; continue treatment.

7*th.* Irritability of stomach subsided; pills discontinued, the mouth being a little sore. Alvine evacuations becoming more healthy and consistent—continue the other remedies.

8*th.* The jaundiced state of the skin, which had abated considerably last night, has returned; the pulse continues unchanged; blister to the right hypochondrium.

10*th.* The blister remained on two days before it vesicated; vesicated surface dressed with mercurial ointment, and porter to be taken through the day.

15*th.* As the general debility is increasing, and his sufferings are increased by the stimulating draughts ordered for him, he is directed to take sulph. quinine and diluted sulphuric acid. This course was continued from this time to the 7th of May, the period of his death, without much apparent change in his condition, except that his emaciation and debility increased. His stools, for the last three days, were very fœted and bloody, and contained a great quantity of a material which was supposed to be fatty; but as the extensive mischief which was found to exist after death was not suspected, not much attention was directed to this point.

Autopsy.—The thoracic organs presented nothing of interest; but on laying open the cavity of the abdomen, the liver was found to be greatly diseased. It was increased in size,—was hard, and exceedingly uneven on the surface, and of a dirty grayish brown colour. It was carefully detached and removed, in connection with the stomach, duodenum, and pancreas. On prosecuting the examination of these parts, it was found that the stomach presented no very striking evidences of disease. The second curvature of the duodenum, however, exhibited a considerable indurated mass, intimately incorporated with the head of the pancreas which was very much increased in size, and exceedingly hard and uneven on the surface. On laying open the diseased portion of the duodenum, it was found to be extensively involved in encephaloid degeneration, which formed a thick mass surrounding the whole intestine, and involving the adjacent portion of the pancreas. Upon the inner aspect of the intestine, this mass was in an extensive state of ulceration, especially upon two sides of the gut, which condition occupied a considerable extent of its surface. This mass occupied that portion of the duodenum which is entered by the common duct of the liver, and so completely occluded that vessel, as to render it almost impossible for any thing to pass through it. In con-

sequence of this, the gall bladder was enormously distended, forced out from the liver, its neck rendered almost obsolete, and together with the cystic duct, which was very much dilated, formed a kind of continuous cylindrical tube, as large as the finger. Indeed the whole of the excretory apparatus of the liver, both within and without the gland, was in this enormous state of distension. The common duct was dilated to the size of the middle finger, and on tracing it up towards the transverse fissure of the liver, the hepatic duct and the two branches which form it, were found in the same condition. At the point at which the latter emerge from the gland, they were large enough to receive the tip of the middle finger, and as they were proportionably dilated to their radicles in the intimate substance of the organ, they could be easily traced out to their origin, and an excellent opportunity was afforded for studying their anatomical arrangement. They were distended with a greenish coloured mucous fluid, which flowed out in great abundance when the liver was sliced, and led at first, before the real condition of the ducts was discovered, to the supposition, that it proceeded from numerous cysts, occupying the substance of the gland. The tunics of the excretory vessels were much thickened throughout their entire extent, thus rendering it easy to recognize the properties of a mucous tissue in the whole of the lining membrane, which presented a fine soft reticulated appearance, contrasting strongly with the dense polished membrane which lined the neighbouring ramifications of the portal vein. The gall bladder contained, besides the large quantity of fluid by which it was distended, a number of small dark coloured biliary calculi; and several of the same kind were lodged in the common duct, where they tended to increase the obstruction occasioned by the encephaloid tumour of the duodenum. The most interesting lesion was, however, the complete occlusion of the trunk of the portal vein and its primitive bifurcations, by encephaloid mattter. The trunk of this vessel, for some distance from the liver, was completely plugged up with this peculiar substance, and on laying open its left and right branches, the same closure was found to occupy the former, nearly as far as the point at which it branches out into the left lobe, while in the latter, it even extended farther,—several of the subdivisions of the vessel within the substance of the right lobe being closed up by the same pulpy material. In one portion of the trunk of the vein, the diseased product seemed

to be slightly attached to the inner surface of the vessel, by means of an exceedingly delicate pseudo-membrane of a red colour; but such an adherence was not discovered at any other point. The hepatic artery was in a healthy condition, and did not seem to be increased in size. The lower portion of the duodenum and the upper portion of the jejunum, contained considerable mucous secretion; but towards the lower part of the latter intestine, this fluid assumed a dirty wine-lee appearance; and in the ileum, it was mixed with a considerable quantity of dark coagulated blood, which occupied likewise the whole of the lower part of the intestinal canal. The mucous membrane, however, exhibited no very important traces of disease affecting its texture. (*Reported by* Mr. D. McMeal.)

Remarks.—We shall first endeavour to deduce from the analysis of this case, some illustrations of the anatomical arrangement of the hepatic ducts within the liver—a subject which, since the time of Malpighi and Ruysch, has given rise to much difference of opinion.

There are two questions bearing upon this point, which remain to be decided. The first is, to determine whether there is any continuity between the blood-vessels of the liver and the radicles of the hepatic duct: the second, the arrangement of the latter at its origin within the liver, and the precise relations between its radicles and the acini of the gland.

Ruysch, influenced by his peculiar views in relation to the structure of glands, maintained that the convoluted vessels, which he supposed compose their acini, inosculate by their extremities with the radicles of their excretory ducts, and consequently, that injections can be passed from the one into the other. A similar opinion was adopted by Sœmmering,* who represents, that injections thrown into the vena portæ, pass readily into the hepatic duct, and vice-versa. Meckel, while he admits the existence of this inosculation, represents, that when fine injection is thrown into the hepatic duct, it does not ordinarily pass into any other vessels, but in a few instances, enters the lymphatics and the portal veins.† The opinion of Sœmmering is also adopted by Cruveilhier, who affirms, that in whatever vessel injections are thrown, they pass into all the others, manifesting the existence of a direct continuity by inos-

* Corp. Humana Fabrica, tom. vi. p. 180.
† Manual d'Anat. tom. iii. p. 455.

culation, between the different orders.* A similar opinion has been very generally advocated by anatomists; but it is greatly invalidated by the authority of others of equal respectability, especially by the researches of Malpighi, Prochaska and Mappes; and the recent elaborate investigations of Johannes Muller, Weber, Kiernan, and others, go far to disprove it. Muller† and Weber have ascertained, that the radicles of the hepatic ducts, which are always larger than the capillary blood-vessels, present blind extremities, like the termination of the bronchial tubes in the lungs; that one of these forms the fundamental arrangement of each acinus, or granule of the gland; and that the capillary terminations of the blood-vessels ramify and form an intricate vascular plexus upon these blind extremities of the excretory tubes, and thus furnish the materials from which the bile is formed. The immense number of radicles thus commencing, gradually unite to form branches, and these branches, in their turn, form by a similar union the main trunks of the hepatic duct, which exhibits an arborescent arrangement, the extremity of each of its ramifications, which is closed, being placed in the centre of one of the granules of the liver. Nearly the same view of the subject has been taken by Krause§ and Kiernan;‖ and while all these authors adopt this opinion relative to the arrangement of the excretory ducts of the liver, they, as well as Mappes,¶ infer as a natural sequence, that there is no continuation by inosculation, between these ducts and the blood-vessels; that injection cannot, therefore, in the natural state, be passed from the one to the other, and that if ever such transmission does take place, it is at the expense of rupture, in the same manner that it sometimes occurs when minute injection thrown into the pulmonary artery, that a small portion of the fluid is extravasated in the bronchial tubes.

So far as the authority and researches of these distinguished anatomists can be admitted, both the problems to which allusion was made above, may be regarded as solved. But as it is extremely difficult to inject the roots of the hepatic duct in the healthy state, to their origin in the granules of the liver, it is

* Anat. Descriptive, tome, ii. p. 573.
† De Gland. Secernent. Structura, &c. fol. Lips. 1830.
‡ Meckel's Archives für Anatomie und Physiologie, 1727.
§ Handbuch der Mensch. Anat. i. 90, 1833.
‖ Lond. Med. Gazette. Dec. 1834.
¶ Dr. Penitiori Hepatis Humani Structura, 4to. 1817.

evident, that more satisfactory conclusions can be deduced from the examination of these vessels in the pathological condition in which they were found in the case under consideration, where they were so inordinately dilated, as to render it easy to trace them with the naked eye, to their points of origin. This we were careful to do. The trunks, branches, and primitive ramifications or radicles of the hepatic ducts, were carefully laid open with sharp scissors, and distinctly traced out to their blind extremities, when it was found that each one of them represented a kind of *cul de sac*, imbedded in the granulated structure of the liver, these blind extremities being closely clustered together, and the ramuscules which proceeded from them were seen converging, to form branches, all of which terminated in the main trunk for the corresponding lobe.

Regarding, then, these minute blind extremities of the radicles of the excretory ducts as the fundamental portion of the gland, or rather of each granule, it is easy to conceive how the intimate anastomoses between the portal and hepatic veins, and the hepatic artery, together with the lymphatic vessels, by twining upon the surface of the several *culs de sac*, form the dark coloured parenchymatous arrangement which has been supposed to constitute a set of granules distinct from those called yellow, but which are in reality identical with them. Those to which the latter term has been applied, owe their yellow colour merely to the bile with which they are tinged, in consequence of that part of them which presents this hue, being formed by the radicle of the excretory duct, while the dark coloured portion is formed by the blood-vessels, so that there are not, in reality, two orders of granules in the liver, as supposed by some able anatomists,—the dark and the yellow colours, upon which that distinction has been predicated, existing in different portions of the same granule, the yellow colour being confined to its centre, while the dark only exists at its circumference.

Another important feature in this portion of anatomy is, that the whole of the excretory apparatus of the liver is lined by a mucous membrane. This is not only true of the common, the hepatic and cystic ducts, and the gall-bladder, but likewise of the whole of the ramifications, and even the minute radicles of the excretory ducts, to the points at which they arise from the acini of the gland. This fact, though generally known, has not been sufficiently regarded by physiologists and pathologists. The properties of a mucous membrane were fully recognized in

the case under consideration, and in the larger branches of the excretory ducts, mucous crypts were distinctly observed. As this mucous tissue is continuous with that which lines the duodenum, it forms a channel, by which impressions may be transmitted directly from the latter organ to the intimate structure of the liver, or in a contrary direction, and thus explains the intimate relations, both physiological and pathological, which exist between these parts.

2. *Physiological Considerations.*—The chief physiological considerations upon which we shall offer any comment, are those suggested by the total occlusion of the portal vein. Two questions naturally grow out of this condition, which it would be interesting to solve: 1. To determine the route by which the blood returned through the numerous branches of the portal vein reached the liver, or if it did not circulate through this gland, the channels by which it reached the vena cava and the right side of the heart. 2. The long mooted question, whether the bile is secreted from the blood of the portal vein. It is evident that any conclusions formed from the present case, relative to these matters of inquiry, must be the result of conjecture, since injections were not resorted to, by which the first question could alone be decided, and since we have no positive means in the phenomena observed, of settling the second.

Assuming, by way of illustration, that the blood of the portal system could not be circulated through its usual channels in the substance of the liver, the existence of a free anastomoses between the branches of that portion of the system, and those which communicate either directly or indirectly with the vena cava, afford a route of adequate extent by which the blood could be returned to the heart. This connection, which has been noticed by most anatomists, has been recently more fully described by Professor Retzius, of Stockholm. In preparing some injected preparations of the venous system, he discovered that by tying the vena portæ near the liver, and throwing a coloured injection into the portion below the ligature, (the vena cava being first filled by injection of a different colour,) branches were filled, some of which proceeding from the duodenum terminated in the cava, while others, arising from the colon, terminated in the left emulgent vein. He also discovered veins proceeding from the rectum, to terminate in the venous plexus of the genital organs. By subsequent investigations he observed an extensive plexus of minute veins ramifying in the cellular

tissue on the outer surface of the peritoneum, part of which communicated with the vena portæ, while the other part terminated in the system of the vena cava. In a successful injection, these veins were seen anastomosing very freely in the posterior part of the abdomen with the colic veins,—likewise with those of the kidneys, pelvis, and even with the vena cava.*

Through these numerous channels, the blood pertaining to the system of the vena portæ could return readily to the heart, although precluded from passing through the liver; and the anatomical arrangement here described, may be regarded as affording a satisfactory explanation of one part of the first question.

But the most difficult portion of the same question yet remains to be answered:—Is there any natural channel or anastomosis, by which a portion of the blood of the portal circulation could reach the liver, notwithstanding the total occlusion of the main trunk of the vena portæ? We think the facts stated above justify a reply in the affirmative. It has been seen, that the portal and general venous systems anastomose very freely upon the whole of the outer surface of the peritoneum, both upon the anterior and posterior walls of the abdomen. Inasmuch, therefore, as this membrane is reflected from the diaphragm over the surface of the liver on the one hand, and on the other, from the transverse fissure of the concave face of the gland along the vessels, to the stomach, we can readily conceive, that the anastomosing plexus of veins in question, which follow the outer surface of the peritoneum, might furnish ample means for the transmission of the portal blood from those venous branches, which by their confluence form the trunk of the vena portæ, to the ramifications of that vein which are expended in the liver, and thus circulate a sufficient quantity of this blood in the substance of the gland, to subserve the purposes of biliary secretion, even where the main trunk is obliterated, as in the present case. We see similar provisions of nature operating in other parts of the vascular system, and there is no valid reason why they should not prove equally efficient in this. It is no more difficult to conceive, that the ramifications which form the two opposite extremities of the portal venous system should be united to each other by means of a free anastomoses, than it is that a similar connection should exist between the branches of the superior and inferior

* Tiedemann und Treviranus, Zietschrift fur Physiologie, v. Heft. i. 1833.

cava; and we have abundance of evidence to prove, that when either the one or the other of these latter veins are obliterated, the anastomoses alluded to is amply sufficient to maintain the venous circulation. This then, to us, is a satisfactory explanation of the other part of the first question; and it enables us to understand how the biliary secretion continued to be performed, although the trunk of the vena portæ was obliterated.

Is the bile secreted from the blood of the portal vein? Those who contend that the biliary secretion is formed from the blood of the hepatic artery, will doubtless object to the explanation given above, and invoke the phenomena presented by this case, in support of their hypothesis. Although the strength of the argument may appear at first view to be in their favour, when all the objections to their doctrine are duly weighed, they lose their advantage. The reasons adduced in favour of the inference, that the bile is formed from arterial blood, and those by which it has been combatted, are too numerous to be detailed. We shall, therefore, confine ourselves to the principal one, which from its being predicated upon a circumstance analogous, in some respects, to that which existed in our case, may be refuted by arguments similar to those adduced above.

The argument which has been most strenuously insisted on, as affording conclusive evidence that the bile is secreted from the blood of the hepatic artery, is predicated upon two cases; one observed by Mr. Abernethey, the other by Mr. Wilson, in which the vena portæ did not enter the liver, but communicated directly with the vena cava. It was inferred from these cases, that as the bile was secreted from arterial blood, the venous blood of the portal vein could not be the natural source from whence the materials of the biliary secretion are derived. The circumstances, as regards the physiological condition of the organ, were here nearly the same as in our case, and indeed all those, in which the trunk of the vena portæ has been found obstructed. Do they warrant the inferences which have been deduced from them? We think not. There are facts which completely invalidate these conclusions, and prove, contrary to the opinion adopted, as far as proof short of absolute demonstration can avail, that even under these circumstances, the bile was formed from venous blood, in the same manner, and by the same process, that it is secreted from that fluid in the natural condition of the organ.

Let us in the first place examine Mr. Abernethey's case, and see how far it warrants the inference that has been drawn from it,

or whether it presents any thing incompatible with the belief, that the bile is secreted from the blood of the vena portæ.

Mr. Kiernan remarks, that Mr. Green had been in the habit for some time of suggesting, that the umbilical vein probably ramified through the liver in this case, and that the hepatic artery communicated with it, and consequently that the vein, and not the artery, conveyed the blood to the secreting part of the liver. Sir Charles Bell also remarks upon the same case, that it is possible the ramifications of the hepatic artery may have opened into the branches of the veins answering to the extremities of the vena portæ. The suggestion of Mr. Green has been fully confirmed by Mr. Kiernan, who lately made a minute examination of the liver in question, in presence of Mr. Mayo, Mr. Stanley, and several other gentlemen. "He found the open and uninjected ramifications of the umbilical vein (the hepatic portal vein) accompanying, as usual, the branches of the hepatic artery and duct."

This circumstance is important in the argument, and corroborated by inferences susceptible of being deduced from the nature of the connection between the minute ramifications of the hepatic artery and the vena portæ, it goes far to prove, that under all circumstances, the blood from which the bile is secreted is venous, even though it may not be derived from those organs which give rise to the principal branches of the vena portæ. The following explanation of the arrangement of the hepatic artery will render this intelligible. It follows accurately the branches and ramifications of the vena portæ; it forms a delicate plexus of minute ramusculi which weave a kind of net-work upon their surface; it also furnishes the vasa vasorum for those vessels, and for the hepatic ducts, and the hepatic veins; and when minute injection is propelled through it, all these vasa vasorum are filled, and the injection passes into the ramifications of the vena portæ, but not into those of the hepatic vein.* The blood of the hepatic artery, therefore, in its transit through these vessels, after having nourished the parts to which it is distributed, becomes venous, and in this condition enters the portal veins, "where, commingling with the proper blood of those veins, it is conveyed to the coats of the secreting ducts,"† and subserves the secretion of the bile.

While this is what takes place where the vessels present their natural arrangement, it is clear, that under those circumstances

* Kiernan, loc. cit. p. 390. † Ib.

in which the proper blood of the vena portæ is precluded from entering the liver, either by obstruction of the vein, or by its opening directly into the cava, the free communication of the hepatic artery with the whole of the branches and ramifications of the hepatic portal veins, the necessary transition of the arterial into venous blood before it reaches the latter vessels, and its final transmission by them to the coats of the secreting ducts, sufficiently demonstrate that the bile, even under these circumstances, is secreted from venous blood. Besides, we have shown how it is possible in our case, for a part of the proper blood of the vena portæ to have reached the liver through the extensive anastomoses described by Professor Retzius, notwithstanding the trunk of the vein itself was completely closed. There can be no difficulty, therefore, in comprehending how the biliary secretion was performed, without being obliged to resort to the inference, that the secretion was effected from the arterial blood.

Experiments on the hepatic artery and the vena portæ have been instituted, with the object of ascertaining which of them is instrumental in secreting the bile. These investigations, however, have not resulted in the establishment of any positive conclusion. In two cases in which Mr. Phillips* applied a ligature to the hepatic artery, the secretion of the bile was not interrupted; but the same thing was observed in three other cases, in which the ligature was applied to the trunk of the vena portæ. Besides, Andral, Bouillaud, and others, have reported several cases in which that vein was obstructed or obliterated, yet the biliary secretion continued; so that, from all the data we have been able to collect, we think the arguments in favour of that opinion, which makes the venous blood the source of this secretion, are the most conclusive; because, independently of other circumstances, they are most conformable to the anatomical arrangement of the vessels of the liver, and the objections which particular cases present against such a conclusion, it will be seen from the foregoing observations, are more apparent than real.

3. *Pathological Considerations.* After the remarks which were made in the description of the post mortem phenomena, it cannot be necessary to dwell upon this part of our subject. The existence of encephaloid matter in the veins, when the parts from which they take their origin are the seat of that pathological state, is a curious circumstance, and naturally suggests the ques-

* Lond. Med. Gazette, ii. 423, 1833.

tion, whether these vessels are instrumental in developing this peculiar matter, or whether they merely become the recipients of it, in consequence of its being conveyed along their branches from the seat of its formation. Much might be said in regard to both these positions, but in the absence of positive information we shall not discuss the subject. Certain it is, that encephaloid matter is not unfrequently found in these vessels when the organs are the seat of it; but we only know of one other case, in which it obliterated the trunk of the vena portæ, as in the instance under consideration. That case is reported and figured by Carswell, in his splendid plates of pathological anatomy,* and the morbid product is represented filling the trunk and branches of the portal vein to a considerable extent. The history of the case, however, is not given, so that we cannot judge how far it corresponds with our own.

Another pathological feature of some interest is, the influence exercised by the obstruction upon the veins of the intestines. It was remarked above, that the patient passed blood in considerable quantities by stool, and that much of that fluid, in a coagulated condition, was found in the lower part of the intestines after death. This is a consequence which we can readily conceive would be likely to supervene under such circumstances. The development of an obstacle to the free transmission of the immense quantity of blood which is derived from nearly the whole of the abdominal organs, must necessarily occasion a preternatural distention of the capillaries of the mucous surface of the intestines and the other organs involved; and if these vessels become distended beyond their capability to resist, hemorrhage or some other physiological or pathological change calculated to relieve them, must ensue. This happened in the present case. The effects of this distention were manifested, first, by the intestinal hemorrhage; and, secondly, by the enlargement of the spleen, which was exceedingly congested and black, and increased to about thrice its natural size. But as the obstruction was doubtless of long standing, it may be inquired why hemorrhage did not sooner take place. A satisfactory answer to this inquiry will be found in the fact, that the anastomoses of Retzius were found adequate, under the ordinary state of the circulation, to allow the blood to return with sufficient freedom to prevent the capillary congestion from reaching that degree, calculated to give rise to

* Illustrations of the elementary forms of disease, fasc. iii. plate iii. fig. 4.

rupture or sanguineous exhalation. So soon, however, as the abdominal organs, and especially the mucous membrane, became the seat of exalted irritation, determining an increased flow of blood to them, these collateral channels proved inadequate to return it to the heart, and intestinal hemorrhage was induced. In other cases, the mechanical distension occasioned by the obstruction of the portal veins, relieves itself by a different process:—a copious exhalation takes place from the whole extent of the peritoneal surface, giving rise to ascites, which can only be removed by overcoming the cause of the obstruction, the accomplishment of which is too often impracticable. Andral and Bouillaud have reported several cases of obstruction of the vena portæ, and the latter gentleman, especially, has demonstrated, that dropsy is not unfrequently induced by this cause. The experience, indeed, of all practitioners has taught them, that various diseases of the liver which tend to impede the passage of the blood through it, are a fruitful source of abdominal dropsy; and as many of the diseases of that organ are incurable, it is often found impossible to effect a removal of the serous effusion which is a consequence of them.

Case II. *Tuberculous degeneration of the liver and heart—Extensive follicular ulceration of the mucous membrane of the stomach.*

A. B. entered the Baltimore Infirmary, on the 21st of March, 1835. He had been sick three or four months, but not confined to bed; and complained at the time of his admission, of difficulty in voiding his urine, and pain in the region of the bladder. His pulse was frequent, hard, and irritable; tongue furred; bowels irregular, and he was troubled with frequent epistaxis. His pains were erratic, shifting frequently to different parts of the body; and after several examinations, his liver was found enlarged and indurated, as was likewise his spleen.

He was submitted to various modes of treatment without the slightest benefit, and his pulse was scarcely affected by the most copious abstractions of blood. He continued to grow worse—became very much emaciated, and died on the 7th of May.

Autopsy.—As permission could not be obtained to examine the body, all the information that can be offered relative to the post mortem phenomena, was procured by a clandestine and very hasty inspection of a few of the organs, and is of course very imperfect.

On laying open the abdomen, the liver was found very much

enlarged, rough and uneven on the surface, greatly indurated, and transformed almost entirely into a mass of large tubercles, which, nevertheless, had interspersed between them, numerous small particles of glandular parenchyma of a very light yellow colour. It weighed seven pounds and a half; and when sliced, the surface of the incision with the smooth light appearance of the tuberculous masses, presented very much the appearance of a mass of felspar rock. But notwithstanding the portions of the granulated texture of the liver which had resisted the encroachment of the tubercles, and which filled up their interstices, were small, bile seems to have been secreted in considerable quantity, as the hepatic ducts were deeply tinged with it.

Numerous small tubercles were disseminated over the surface of the heart, between the pericardium and the muscular substance of the organ, but none existed in the latter.

The disease was not confined to these organs; the mucous membrane of the stomach was likewise extensively involved. Some of the follicles were very much enlarged and elevated,—some of them even to the size of a ten cent piece: and those in which the diseased process had advanced farthest, were ulcerated upon the summit, the ulcers being surrounded by prominent ragged borders. One of them, which was very large, was covered upon the surface with a black coloured pseudo-membrane, which adhered closely to it. Unfortunately the condition of the mucous membrane of the intestines could not be ascertained; nor was it possible to examine the kidneys and bladder.

(*Reported by* Mr. J. Hanson Thomas.)

Remarks.—The few details obtained by the inspection of the body in this case, will not enable us to enter into many reflections relative to its character and general phenomena. Tubercle of the liver is not an uncommon disease, yet we are possessed of no means of diagnosis, by which its existence can be determined with any certainty. Nor has the process by which this morbid product is developed been satisfactorily ascertained. Whether it be a consequence of inflammation, as some pathologists contend, or not, one thing at least is highly probable—that the tuberculous matter is a consequence of a mere perversion of the acts of those powers by which nutrition is accomplished in the healthy state, resulting from a total change of the organic elements, operating so far, that the materials which are deposited in the midst of the tissues, instead of possessing those properties which are necessary to enable them to become

converted into organized structures, are for the most part devoid of plasticity, and merely form inorganic accretions of matter, deposited in the meshes of the natural structures. While, therefore, tuberculous matter is generally separated from the circulating fluids by the instruments which are concerned in building up the organized solids, its formation seems to possess a greater analogy with the process of secretion, than with that of nutrition; because it is the character of the elements separated by the latter process, to be susceptible of becoming organized, of which tuberculous matter is never capable. Hence some modern pathologists have referred the origin of tubercle to a perversion of secretion; but it will be seen by an investigation of the subject, that the difference is purely verbal, and is of no great importance.

It is impossible, from our limited knowledge of the case, to decide what was the relationship between the affection of the liver and that of the stomach, or which organ was first seized upon by the morbid process. The sympathetic connection between them is so intimate, that affections of the one are very readily transmitted to the other, and this communication takes place with great facility in either direction. The extensive alteration of the structure of the liver in this case, seems to indicate that it was the primary seat of the disease; but it must be borne in mind, that chronic inflammation of the mucous membrane of the stomach and bowels may exist for a length of time, and inflict very serious ravages upon the adjacent organs, without undergoing changes of structure at all proportionate to those which it is instrumental in developing in other parts, through the medium of its intimate sympathies with them.

An interesting feature in this case was the epistaxis. Hemorrhage from the nose has long been known to be a common attendant upon diseases of the liver, yet it is not very easy to account for this association. The most probable explanation is, that the mechanical obstacle presented by the diseased liver to the passage of the blood through its vessels, occasions a corresponding impediment to its passage through those capillaries from which the vena portæ takes its origin; and the circulation through the descending aorta being thus somewhat obstructed, a greater quantity of blood than usual is distributed to the head. But this solution of the question, though apparently plausible, is not free from objections. The hepatic obstruction, we can readily conceive, would tend to give rise to preternatural congestions of the capillary vessels which are in communication with the

radicles of the portal veins, yet as a large proportion of these minute vessels are spread out upon the whole mucous surface of the alimentary canal, we see no good reason why hemorrhage should not take place from them, instead of the nose, especially as the vessels of the latter only become affected secondarily. This we should apprehend would be the more apt to occur, as from the investigations of Ribes, it appears, that the gastric and intestinal villi are made up almost entirely of a plexus of minute venus radicles; and Professor Horner remarks, from some recent examinations, that "the mucous coat of the alimentary canal, when successfully injected, appears to consist almost entirely of a cribriform intertexture of veins."* This being the case, it is natural to infer, that an obstruction of the portal vein, of sufficient magnitude to impede the aortal circulation through the intermedium of the intestinal capillaries, would tend rather to give rise to hemorrhage from these minute venous ramifications, than from those of the nose, and we accordingly find, that intestinal hemorrhage is a frequent concomitant or consequence of such obstructions, even when no blood is discharged from the nose.

The following case is of a different character:

Case III. *Asthma.—Aneurism of the arch of the aorta, prevented from rupturing by adhesions contracted with the front of the trachea.—Disease of the pneumogastric and phrenic nerves.—Large glandular tumours compressing them.—Hepatization of the lower part of both lungs.—Death from small-pox.*

Robert Williams, seaman, was admitted into the Baltimore Infirmary, under my care, July 14th, 1834. He complained at the time of considerable difficulty of breathing, but did not present any indications of high febrile excitement. The sound elicited by percussion, was dull over the greater part of the chest, and the respiratory murmur was feeble, especially in the submammary regions. Cupping and other remedies, indicated by the phenomena of the case, were resorted to, but without much benefit, and he had not been long in the house, when he was attacked with a violent paroxysm of asthma. As these paroxysms continued to recur at short intervals, this disease became the prominent object of attention, and the whole routine of cups, blisters, tartar emetic pustulation, issues, emetics, nauseants, narcotics, antispasmadics, galvanism, &c. were successively employed, with only partial and temporary benefit. At one period, the

*American Journal of Medical Sciences, May, 1835.

tincture of lobelia, and afterwards, the tincture of strammonium, seemed to afford more relief than any thing else; but they gradually lost their effect. The patient remained in this condition, with slight variations, until some time in the month of March, 1835, when he contracted small-pox, and died on the 19th of that month.

Autopsy.—As we were anxious to ascertain the causes which had occasioned so much disturbance of the respiratory function, the examination of the thoracic organs was prosecuted with much care and attention. On opening the chest, the upper part of both lungs was found crepitating, but the lower lobes were affected with chronic induration, to a degree which almost precluded the passage of the air through them. Although the upper portion of the lungs exhibited the spongy crepitating feel of health, it was found on prosecuting the examination more minutely, that the bronchial ramifications were dilated, and their tunics considerably thickened. The mucous membrane, and the circular muscular fibres especially, were in this condition, and the latter were so conspicuous, that they could be distinctly traced with the naked eye, as far as it was practicable to lay open the tube with the fine points of a small pair of scissors,—thus confirming the opinion so ably sustained by Reisseissen, and refuting that of those who deny the existence of these fibres in the small tubes. The mucous membrane of the larynx, trachea, and the larger divisions of the bronchi, was covered by a soft pultaceous false membrane, and was besides occupied by several small-pox pustules.

The heart was healthy, but the aorta was somewhat dilated in its ascending portion; and the posterior face of the arch, where it reposes upon the front of the trachea, was occupied by an aneurism, in which, however, there were no lamellated concretions. This aneurism was not extensive, and presented the semblance of being formed, at first, by a simple *sacciform* dilatation of all the coats of the posterior face of the vessel backwards, towards the front of the trachea. The latter was somewhat indented or compressed by the encroachment of the tumour, and the cellular coat of the sac had contracted such intimate adhesions with the surface of the trachea, as to prevent the aneurism from increasing much in volume. It is probable, however, that had the life of the individual been prolonged, a communication would have formed eventually between the aneurism and the cavity of the trachea.

Wedged in between the arch of the aorta and the sternum, there was an oval glandular tumour as large as an egg; and posteriorly, reposing upon the back part of the right and left bronchi, there were two larger tumours of the same kind, one upon each side. They forced the pneumogastric and phrenic nerves out of their natural position, and had them ranging over their surface,—the former behind, the latter in front.

One of the most interesting features of the case was the diseased condition of these nerves. Where the pneumogastric chords ran over the surface of the tumour, they were increased to twice or thrice their natural size, and were besides rendered almost as compact as cat-gut strings. The phrenic nerve, on the right side, was in the same condition. In the pneumogastric of the left side, where it crossed the tumour, numerous striæ of an ecchymosed appearance were observed disseminated irregularly through the nervous chord, presenting the aspect of an extravasation of blood, within the minute sheaths or neuralemma of the filaments.

The whole mucous surface of the alimentary canal, as well as that of the air passages, was intensely inflamed, and at some points very much softened. This latter condition was most conspicuous in the mucous membrane of the stomach. The inflammation was a consequence of the small-pox, and had no connection with the disease under which the individual had been labouring previously.

Remarks.—This case is particularly interesting, both on account of the organic lesions it presented, and the functional disturbance to which they give origin during the life of the patient. The hepatization of the lower part of the lungs was well calculated to occasion considerable embarrassment of respiration, yet it is questionable if it should be regarded as the primary source of the asthmatic symptoms. It is far more probable, that the latter were consecutive upon other pathological conditions;—as the aneurism of the aorta, its encroachments upon the trachea, and, especially, the impairment of innervation occasioned by the morbid affection of the pneumogastric and phrenic nerves. Numerous cases have been reported, in which violent asthmatic symptoms were induced by various lesions of these nerves, and the readers of the first series of this journal will remember, that in a paper we published on Asthma, in the second number, p. 312, we referred to several such instances.

As regards the aneurism of the aorta, its existence was not

suspected during the life of the individual, and from its peculiar character and the nature of its relations with the surrounding parts, it is highly probable that if a suspicion of that kind had existed, the disease could not have been detected by any of our means of diagnosis. Indeed, it is exceedingly different under most circumstances, to distinguish aneurisms of the aorta from other affections of the thoracic organs, and it is chiefly where the disease has obtained a considerable size, that any positive conclusions can be formed. Where it is small, as in the present case, we are inclined to think it would seldom be possible, by the ordinary rational or physical signs, to detect its existence. The seventh number of the American Cyclopedia of Practical Medicine and Surgery, just published, contains an article on the pathology of the aorta, in which we have attempted to collect all the most important information relative to the characters and diagnosis of aneurism of that vessel, and to that we shall refer the reader for further information on the subject.

ARTICLE III.

Case of Diabetes Mellitus. By Richard Wilmot Hall, M. D. Professor of Obstetrics in the University of Maryland.

On the 22d of April, 1831, I was requested by Dr. E. Perkins, of this city, to visit with him Robert Kinnier, a lad about seventeen years of age, labouring under diabetes. On reference to my notes, I find the details of the same as here given. Our patient appeared to be somewhat emaciated; had a sallow complexion, with those appearances of general disorder which often follow our autumnal remittent fevers. On inquiry I learned that he had suffered by an attack of this disease during the preceding autumn, while engaged with his father on the line of the Baltimore and Ohio rail road; and after the more severe symptoms of attack had passed away, a remittent fever with irregular paroxysms had continued to manifest itself occasionally. At the time we saw him, these paroxysms were interrupted; but he still remained languid, incapable of active exercise, and much depressed in mind. He sometimes walked slowly in the open air, from which he experienced fatigue. His liver seemed to perform its functions slowly, but there was no tenderness or enlargement from which might be inferred a serious disturbance of this organ. He had occasionally

a very slight cough. The tongue was whitish and his skin cool. The perspiration did not appear to be materially changed from the standard of health. We requested that the urine should be retained for our examination, and the quantity discharged between the hours of nine o'clock in the evening and six of the following morning, (nine hours) was found by measurement to be more than one gallon—of a pale straw colour, and sweet to the taste,—pulse 84—appetite irregular—digestion also imperfect. He laboured under no important pulmonary disturbance, and the alvine dejections evinced the presence of biliary matter.

Tonics were first directed. S. quinine, phosphas. ferri, &c. were freely used without apparent benefit for some time. No vegetable preparation, except bread was allowed to be taken. His diet was directed to be purely *animal* with the foregoing exception. Still finding that his diabetic sysmptoms were not materially altered, we prescribed the tinc. meloe. vesicat. m. xx. ter. die. directing an increase of five to ten drops each dose, unless strangury should have been perceived.

On the 19th of May, we found his pulse 84—one pint of urine discharged during the night—bread omitted and diet altogether animal. It may be remarked that he relinquished the use of bread with great reluctance,—occasionally obtained it by stealth, but acknowledged that it always increased the flow of urine. He then concurred in the propriety of the prohibition, and abstained from its use. On this day he was taking 270 drops of the tincture thrice a day—tongue more natural—urine less—bowels more regular,—directed to increase the tincture. He sleeps more comfortably during the night.

On the ninth of June, dose of tincture four hundred drops, which produced a slight strangury—bowels regular and fæces natural in appearance—urine last night ℥ iv.—diminished the quantity of the tincture—pulse 84.

12th June. Takes 350 drops—tongue more natural, pulse 90 and soft—appetite and digestion improved—so also his general appearance. After this period he gradually increased the amount of the tincture to four hundred drops each dose, without strangury and with manifest advantage. He now was enabled to take exercise in the open air, and his strength was increasing daily.

On the 19th June, he applied to the apothecary for a fresh supply of the tincture. A small quantity remained in the bottle from which he had previously been supplied, and in taking it

down from the position which it occupied, the fluid was agitated, and thus suspended much of the fine particles of the cantharides. Of this turbid fluid he took in the morning 425 drops, estimated to be double the strength of the pure tincture. Pain of the kidneys, distressing strangury, and urine slightly tinged with blood, followed. When called to visit him, I found his pulse 90 per minute, voluminous and active. The warm bath was forthwith directed—m. 60, Tr. opii. with ʒ i. ol. ricini were given with mucilaginous drinks. He was soon relieved, and readily evacuated the bladder. The quantity of fluid was small. 20th June, pulse 90—quite composed—free from pain, and strangury; urine natural, and moderate in quantity. Directed the tincture to be omitted. No morbid change, or increase in the quantity of urine was perceived after this. On the 23d of June, he had a slight paroxysm of remittent, which was speedily interrupted by the use of S. quinine. Pulse 80 on the 26th, and no evidence of diabetes remaining. He soon regained his strength, and entered on an active course of duty, as a grocer, in this city.

Baltimore, May 22, 1835.

SELECTED PAPERS.

ARTICLE I.

On the Employment of Sheet Lead as a Dressing to promote the Cicatrization of Wounds and Ulcers. By Reveille-Parise.

The method of dressing with sheet lead, appears to me much better adapted to effect the object proposed than the ordinary means. The plan adopted is, to cover the wound, already in a condition to heal, with a piece of sheet lead, of an extent and thickness to be determined by the size of the diseased surface, and other circumstances to be mentioned presently. It should be properly confined by means of a compress and bandage, or by strips of adhesive plaister, when the bandage alone is not sufficient. There is no species of dressings more simple, expeditious, comfortable and convenient than this. The softness and pliability of the lead allow it to adapt itself readily to the shape of the parts, while the same properties render it quite as easy to cut it of the proper shape and dimensions, as an ordinary piece of lint, and at the same time make its application exceedingly easy. That the metal used in this way is innocuous, we think will not admit a doubt, since the protoxide of lead, or litharge, has been long employed for the purpose of cicatrizing wounds and ulcers. It must not be inferred, however, that the sheet lead, like these substances, acts in virtue of any specific properties; its operation is purely mechanical. That this is the case, is evident from the fact, that I have obtained the same effects from the employment of plates of tin, silver and gold. The ductility of the lead, however, and its cheapness give it the preference.

An enumeration of all the advantages of this method of dressing, will suffice to shew that it cannot be necessary to resort to unguents. What in effect can such applications accomplish? The object is not to calm irritation and promote suppuration, but to obtain cicatrization. As the adherence of the borders of the wound is not to be dreaded, applications of unguents and cerates are altogether useless. The non-adherence of the dressings to the edges, and to the diseased surface, is an important advantage; because there is no pain experienced in the removal of the dressings; the newly formed cicatrix is not liable to be torn up, and the wound is kept clean and free from crusts and particles of ointment and charpie, which are apt to adhere to it when other dressings are employed.

I shall not swell these observations by a detail of individual cases; a few examples, however, may be cited in order to illustrate the general precepts. M. de S. in descending a stairs, received a slight wound in

the heel, which refused to cicatrize. The application of ointments and plaisters increased the irritation and swelling. Fine charpie, at first dry, afterwards endued with cerate, adhered to the surface, and even produced greater aggravation than the other dressings. At this juncture I was called. A piece of sheet lead was confined upon the part by adhesive strips, and the ulcer cicatrized in a few days.

These dressings can be applied with exceeding ease and promptitude, and they need not be so often repeated as those in common use; since they are not attended with that heat and humidity of the wound so favourable to decomposition, nor with itching irritation so apt to be excited by unctuous substances. It is easy, therefore, to conceive, how by this procedure the healing process will be promoted, there being nothing to interrupt its progress. The operations of nature, when not thwarted in their tendency, and when aided by the co-operation of art, set aside the obstacles to the healing process, and advance steadily in the accomplishment of the cicatrization of ulcerated surfaces. These, powers are never more clearly displayed than when the lead dressings are employed.

To these advantages may be added another: in the employment of the plates of lead, those formidable infections are never to be dreaded, which sometimes take place in using old and inferior charpie. Economy is likewise a consideration of some weight, the more especially, as the price of the best charpie is daily increasing, and even at present, it is a source of such heavy expense to large establishments, that attempts have been made to diminish this heavy expenditure. The means which I indicate is as simple as it is effectual. A single plate of lead, if not too thin, will not only serve for the entire cicatrization of one ulcer, but may be afterwards employed on others,—the only precaution necessary being, to cleanse it carefully, and slightly polish its surface.

These are the advantages of the mode of dressing ulcers which I propose to substitute for that in common use. They have been exemplified by the numerous applications I have made of the procedure in question, as well as by the experience of others, who since the publication of my first memoir have adopted it. So that theory and experience in this particular, are in full accordance with each other.

At the time of my first publication, some surgeons, supposing that the leaden plates were only proposed for the cure of ulcers, did not resort to them for other purposes, and consequently obtained but partial or no success. Such was not my intention. My object was to shew, that wounds and ulcers in the way to cicatrize; viz: those which are wide, superficial, red, in a state of free granulation, covered with a fibrino-purulent secretion, and surrounded with a deep rose-coloured areola, should be dressed and cicatrized by the application of plates of lead. It is only necessary to remove the dressings every two or three days, according to the abundance of the secretions.

On the other hand, when the wound is deep and presents no disposition to heal—when there is pain, profuse suppuration, especially if kept up by any peculiar virus, and when it is judged necessary to resort to local applications, as cataplasms, I question whether the method in question will prove successful: such at least is the result of my own experience. Nevertheless, it should be employed as soon as these obstacles are removed, and the part manifests a tendency to cicatrize. Notwithstanding the species of extension presented by many wounds, there is reason to believe that this plan of dressing may be employed in a majority of wounds. I may even subjoin, that there are cases, in which it will succeed in a manner somewhat different from that expressed above. Thus in many abscesses and encysted tumours, after the contents have been evacuated by a small puncture and the application of a cup, if a tolerably thick plate of lead be applied to the surface, and confined by a proper bandage, the adhesion between the walls of the cavity may be obtained in a short time.

In all cases in which the diseased surface has been reduced to the condition of a simple wound, and the obstacles to cicatrization have been removed, the method proposed is superior to all others, and success is certain. It is nevertheless more particularly applicable to such as are superficial and present a great extent of surface, as is exemplified in burns. If they are slight, the plates may be resorted to immediately; but when they are profound, time should be allowed for the accompanying accidents, and the profuse suppuration to pass away. These rules attended to, they all heal promptly under the application of a simple plate of sheet lead, to be changed according to circumstances. The same may be remarked of certain blistered surfaces, in individuals of an irritable habit, and labouring under protracted diseases. Many practitioners have remarked, that such persons support with difficulty the application of charpie, adhesive strips, and plaisters spread with cerate, to the raw surface. Each dressing is attended with acute pain, the surface bleeds more or less freely, and in some cases, fever and wakefulness are the result of these painful dressings, which always retard the process of cicatrization. All these inconveniencies may be effectually obviated by the simple application of a piece a sheet lead.

This method of dressing is equally successful upon parts in which cicatrization is with difficulty accomplished; as the elbow, the crest of the tibia, the malleolus and the tendo achilles. Few surgeons have escaped the embarrassment experienced in healing ulcers of small extent upon these parts; by the new method they may by cicatrized promptly.

Dartrous ulcers, and indeed all dartrous and erysipelatous affections in a state of suppuration, cannot be healed by this method; but are ameliorated by it, when it is not found necessary to employ tonic

applications, or when continuous medicated lotions are simultaneously used. Experience has demonstrated, that there are wounds with loss of muscular substance, which cannot be cicatrized by any means. The plates of lead, under such circumstances, have not appeared to me to be more successful; yet they can be applied with more convenience and promptitude than dressings of charpie. These advantages are greater than might be supposed in such wounds, which are thus covered with a kind of protection, capable of serving as a substitute for the natural integuments.

It is universally known, that extensive cicatrices become lacerated with extreme facility, and that they afterwards heal with difficulty, either on account of the feeble vitality of the part, or some other cause. Hence the disadvantages of dressings of charpie and cerate; each successive removal of them tending to destroy the newly formed cicatrix, and in this manner, to perpetuate the sore. These inconveniencies are removed by the lead, though the cure cannot be so soon accomplished as in other cases. Even when the new cicatrix has formed, it may be strengthened by the lead; and it rarely becomes torn a second time under this species of protection.

The advantages of this new mode of dressing, are fully signalized in wounds, ulcers, and erosions which take place in limbs affected with œdema or other species of engorgement. Experience has fully shewn the insufficiency and even danger of charpie and cerate dressings in such cases, and their inevitable tendency to aggravate the disease. It may be replied, perhaps, that if seconded by compression, they will prove successful; but to this it may be objected: 1st, That compression does not diminish the inconveniencies of the application of charpie and unguents to the wound. 2d, That this compression is not always practicable. 3d, That the lead dressings, instead of opposing any obstacle to the employment of this means, favours, on the contrary, the attainment of its good effects. My experience has abundantly proved the truth of this assertion. The following case affords conclusive evidence. The Baron L——, of an active temperament, but broken down by age and the labour of the cabinet, was attacked with a chronic enlargement of the liver, which ended in dropsy, and finally destroyed his life. During the course of this protracted disease, his legs became tumid, even before symptoms of serous infiltration were apparent; the skin became red, sensitive, preternaturally thin, and was affected with frequent excoriations, which terminated in ulcers difficult to heal. These effects were produced by the friction occasioned by fine thin stockings, and his legs were covered with ulcers, which added to the pain of his situation. The finest charpie, the freshest cerate, and the most soothing dressings, increased the mischief. Compression was also employed without success, and was so painful, that it could not be supported. I placed the legs in a horizontal position,

covered the ulcers with a thin plate of lead, and confined it with a moderately tight bandage: the diseased surface was soon healed, and as other ulcers formed, they were treated in the same manner.

In some young children, blistered surfaces are very prone to ulcerate profoundly, and to increase in extent, in spite of all local applications. Fresh butter, cerate, goulard lotions, &c. often prove of no avail; but a simple plate of lead will often heal them in a short time. I was called to visit a child, to whose arm a blister had been applied for the relief of an attack of bronchitis. The blistered surface was so extensive, notwithstanding all the means that had been employed, that nearly the whole arm was excoriated. The child was also affected with acute pain, want of sleep, and extreme irritation. I covered the whole surface with a thin leaf of lead, which was removed next day, and a cure was speedily affected. It also often happens, that issues, and cauteries, after being established, cannot be sustained, on account of the preternatural irritation of the dermoid tissue, or some other inappreciable cause. The contour of the part is surrounded by an erysipelatous blush, which is augmented under the use of ivy leaves, cautery paper, and other means usually employed in such cases. The application of a thin plate of lead for a time more or less considerable, remedies all these difficulties. In confirmation of this assertion, I could cite numerous examples, did my limits permit.

As a dressing to ulcers, properly so called, the plates of lead can scarcely be employed, except on the score of economy, and not for the purpose of promoting cicatrization, as long as the ulcer is perpetuated by some special cause, either local or general, which must be first removed. Varicose ulcers are, perhaps, those in which this remedy promises most advantages, especially when aided by pressure. Sheet lead was employed successfully in these cases, by M. Marjolin, (Dict. de Med. Art. *Ulcere.*) By some practitioners, the method of Baynton, or the application of adhesive strips, is deemed preferable to the sheet lead. I would reply, 1st. That this last method, and the leaden plates are not employed under the same circumstances, and for the reasons enumerated above. 2d. That there are cases in which Baynton's method is impracticable; as for example, when a leg is much swollen and infiltrated, and at the same time ulcerated at several points,—also when the ulcer is seated upon any other part than the extremities.

The following are the rules I observe in the application of this method of dressing. I will suppose that one of the extremities has received a severe wound. After having examined its depth and extent, with the object of ascertaining that there is neither fracture nor dislocation, and removed all extraneous matter, should any exist, I attend to the disgorgement of the wound, either by suffering it to bleed freely for some time, by means of incisions, and especially by the repeated application

of a cup with a piston attached. This latter procedure greatly favours union by the first intention, where it is practicable, and facilitates the healing of other wounds. The parts having been thoroughly disgorged, the subsequent inflammatory congestion should be combatted by the application of compresses dipped in cold water, or goulards lotion, either with or without the addition of laudanum, according to the intensity of the pain, and the susceptibility of the subject. When inflammation is fully developed, it only remains to moderate the organic excitation, and to counteract the local determination. All practitioners resort very properly, under such circumstances, to emollients in form of cataplasms, fomentations, embrocations, &c. which are continued until suppuration is established. This process was formerly divided into two periods: 1. *Preparative* suppuration, when the pus is serous and crude, to use the language of the times: 2. *Consolidating* suppuration. It would be better, perhaps, if this distinction were not neglected at the present day, since it is just, and is founded in fact. During the continuance of the first, I employ cataplasms, digestive pledgets, cerate, and other analogous means; but so soon as the second period arrives, I abandon the use of charpie, and all unctuous applications, thinking with Ledran, that it is not by medicaments introduced into a wound that it is cured, and that strictly speaking, all applications of charpie, or medicaments, should be regarded as a foreign body. It is under these circumstances that I resort to the sheet lead, according to the regulations above described, which I continue until the wound is completely cicatrized, and some time afterwards, with the view of furnishing a salutary degree of support. This dressing should only be removed every second, third, or fourth day, according to the abundance of the suppuration. When it is necessary to use pressure, the piece of lead may be a little thicker than ordinary, taking care not to have it so heavy as to occasion fatigue by its weight. Should the granulations become exuberant or spongy, and the surface of the sore remain stationary, the ordinary means must be employed.

I could cite the testimony of many surgeons in favour of this method of dressing ulcerated surfaces, but shall content myself with that of M. Yvan, surgeon in chief of the *Hotel des Invalides.* He not only employed the sheet lead dressings with success in the cases indicated by me, but likewise in the treatment of hospital gangrene.

[*Bulletin generale de Therapeutique.*

ARTICLE II.

Lecture on Hæmorrhoids. By Sir B. C. Brodie, Bart.

In the present lecture, I purpose to make some observations on the disease which we call piles, or hæmorrhoids.

A patient consults you, complaining of swelling, pain, and tenderness, in the neighbourhood of the anus: you examine the part, and find on its verge a number of tumours, about the size of the end of the thumb or finger, with broad bases, not very distinct from, but running one into the other, covered by the common integuments, and of a more or less purple appearance. If you cut into one of these tumours there is immediately a flow of venous blood, followed by a small quantity of arterial blood, such as might arise from a cut any where else. On making a section of the tumour, it presents to the eye the appearance of dilated and tortuous veins: in fact you cannot doubt that they are dilated veins; they are exactly like varicose veins of the leg. The tumours which I have described are situated below the sphincter muscle, and we call them *external piles.*

Another patient consults you, complaining also of a swelling at the anus, accompanied by pain and tenderness. You examine the part, and find a number of tumours of a different kind. These, too, have broad bases, and run one into the other, forming a circle, which projects below the anus. They are covered, not by the common integument, but by the mucous membrane of the rectum protruded from above the sphincter muscle. On making a section of one of these tumours there immediately flows venous blood, and arterial blood may flow afterwards. On looking at the divided surface, it is evident that the tumour was composed of a large tortuous vein. It is the accidental enlargement of these tumours which causes them to protrude externally; but they are formed above the sphincter muscles, and we call them internal piles, or hæmorrhoids.

I cannot doubt that piles are just what I have mentioned—dilated varicose veins. This is the common theory of their formation, and I certainly believe it to be correct. If you cut through piles, and dissect them, as it were, in the living person, you see that they are made of dilated veins; and if you dissect piles in the dead body, you find them just the same. If you insert the pipe of a syringe into the trunk of the inferior mesenteric vein of a person who had laboured under piles, the piles become all dilated largely with the injection. I know that some have held a different opinion concerning the formation of these tumours, and have supposed that they were not composed of dilated veins: but I apprehend that they have bsen misled by examining the parts in the advanced stage of the disease. If you wish to know what any disease really is, you must make your dissection of it in its origin; for in its progress, one morbid change is followed by another, and when a disease

has lasted for a considerable time, you find various appearances in addition to those which existed in the first instance.

Those ultimate changes which take place in cases of piles, are exactly similar to those which occur in connection with varicose veins of the leg. You know that at first the veins of the leg are simply varicose, or dilated; that at last they become inflamed; that lymph is deposited in the cellular membrane surrounding them, and that at last there is a great mass of induration, in which the diseased blood-vessels are, as it were, imbedded. So it is with the veins of the anus and rectum. At first they become simply dilated; repeated attacks of inflammation cause an effusion of lymph into the adjacent cellular texture, and then the pile appears like a solid tumour; in the centre of which, however, you still find the dilated vein in which the disease originated.

I have divided piles into internal and external; but, in fact, it is the same veins which are affected in both cases. The veins run on the inside of the sphincter muscle, and where the muscle compresses them there can be no dilatation of them: it is a bandage constantly operating to prevent the dilatation in this particular part; but above and below the muscle the veins become dilated.

Whatever tends to obstruct the return of the blood from the inferior mesenteric vein will lay the foundation of piles. It is said that persons with diseased liver are liable to piles; and no doubt they are likely to be so more than others, because the hard and indurated mass of a diseased liver interferes somewhat with the return of the blood from the abdominal viscera through the *vena portæ*. However, a great many persons have piles who have not diseased liver. The most common cause of piles is obstinate costiveness. Where the colon becomes loaded, and especially the sigmoid flexure, with hardened fæces, there is a pressure on the trunk of the inferior mesenteric vein, which interrupts, in some degree, the return of blood from its branches. Women, during pregnancy, are liable to piles, the pressure of the gravid uterus producing the same effect as an accumulation of fæces; and women who have borne children many times are liable to piles ever afterwards, the veins which have been repeatedly kept in a state of dilatation not becoming again permanently contracted afterwards. Piles are more frequent in the upper classes of society than in the lower. You know that in hospital practice you see comparatively few cases of piles, but out of it, I must say that they form a very large proportion of the cases that come under my care. The reason of this difference is to be found in the different mode of life in the various classes of society. The better classes take but little exercise, and they are more liable to constipated bowels than the lower classes, who take much exercise and live a great deal in the open air. There is a notion that those who take aloetic purgatives are more liable to piles than others; but I must acknowledge that I am not

quite satisfied of the fact. I have a respect for all popular notions believing that there is in general some truth at the bottom; and I will not say, as every body thinks so, that aloes will not make people liable to piles, but I am sure they do not produce that effect to the extent that is supposed; and I could not be certain, from my own observation, that they are productive of it at all. The fact is, that those who are habitually taking aloetic purgatives are persons with costive bowels, who, as I have already mentioned, are just the individuals most liable to this disease.

The symptoms which are produced by piles differ accordingly as they are internal or external; and also according to the stage of the disease. In the origin of the disease, when the piles exist only in a slight degree, the patient complains of a sense of heat and itching about the anus; and every now and then, when he is costive, the external piles becomes a little swollen and tender; the internal piles become swollen also, so as to fill up the cavity of the gut, thus exciting a sensation as though a stick, or some other foreign body, were lodged in it. The external piles sometimes inflame, swell, and become tender, so that the patient can scarcely bear them to be touched, and cannot walk without difficulty. They may continue thus inflamed for some considerable time, and then the inflammation may subside; the piles generally returning to the condition in which they were before the attack of inflammation came on, but not always.

Sometimes an abscess forms in one of these inflamed external piles, and bursts externally. The abscess may be troublesome to heal, but when it is healed it is found that the cavity of the vein is obliterated, and that it is, in fact, cured. Such an abscess as I have just mentioned must be distinguished from a *fistula in ano;* from which, indeed, it is essentially different, as I shall explain more fully hereafter. Sometimes, when an external pile is inflamed, the blood in it becomes coagulated, and it is then hard to the touch. If under these circumstances you slit open the pile with a lancet, there comes out a mass of hard coagulum, perhaps as large as a pea or a horse-bean; the cavity inflames, suppurates, and granulates; the same thing happens as though suppuration had taken place in the first instance, and the pile is obliterated. But if you do not slit open the pile, and leave the disease to take its own course, the cavity being blocked up by the coagulum, the vein becomes obliterated, after which the coagulum is gradually absorbed, and the pile is cured; that which was a pile before being now converted into a flap of skin. Just the same circumstance happens with varicose veins of the leg, where sometimes there is a natural cure, in consequence of the coagulation of blood in the dilated vessels. Sometimes, when a pile is thus distended, with coagulated blood, the skin becomes so much attenuated that it gives way in some one point, and the blood being gradually squeezed

out, suppuration probably takes place; and the case proceeds just the same as if you had opened the pile with a lancet. It is very common for external piles to undergo a process of natural cure in one or other of the ways which I have now described; and by examining the parts, you may ascertain whether these changes have taken place, as every one of them, after the cure is effected, becomes at last converted into a fold or flap of skin. Thus, if you see a patient with three or four loose folds of skin at the margin of the anus, you may know that these were formerly piles. At first these folds of skin are large, loose, and pendulous, but gradually they beoome contracted, till at last they give no sort of inconvenience to the patient.

Internal piles, as I have already told you, in slight cases produce heat and itching; and when inflamed, they give rise to a sensation as if there were some foreign body lodged in the rectum. Sometimes they are so much distended, that the gut is incapable of containing them, and they are pushed out through the anus, forming a tumour, which, while it projects externally, is still covered by the mucous membrane of the bowel. When internal piles are large, they always protrude when the patient goes to the water-closet, and afterwards go up spontaneously. If they be larger still, after going to the water-closet they will not return spontaneously, but the patient is under the necessity of pushing them back with his hand. If they be larger still, they come down at other times, especially when the patient is walking, so that he cannot well take any exercise. Sometimes you see one small internal pile permanently protruded, forming a red vascular tumour of the size of the extremity of your little finger. This is painful, and otherwise very troublesome, to the patient, by keeping up a great and constant discharge of mucus. Sometimes there is a large protrusion of internal piles for several days, then they gradually become reduced in size, and go back into their proper place above the sphincter muscle. In short, with respect to the protrusion of internal piles, there are all possible varieties of circumstances: they may protrude occasionally, for a short time, or for a long period; they may be constantly protruded; or there may be a large protrusion at one time, and a small constant protrusion besides. Whenever the protrusion, be it large or small, takes place, there is an abundant secretion of mucus from the rectum; the piles themselves are sore to the touch; the surface is red and vascular; and if you put your hand upon them, you find that you can diminish their size by pressure, but the moment you take off the pressure, they are as large as ever.

In the state which I have now described, internal piles are not unfrequently confounded with *prolapsus of the rectum*—nay, in general, patients, and even most medical men, describe the disease under this appellation: but the term is improperly employed. There is prolapsus of the rectum independently of piles: the disease may even originate in

piles, and yet, when once established, it is entirely different from them. In a genuine case of prolapsus of the rectum, the gut itself comes down, sometimes several inches in length. When internal piles protrude, of course that portion of the mucous membrane of the bowels covering them is pushed down, because they could not come down without it; but you will easily understand that this is entirely a different matter from the whole length of the rectum, or even a large portion of it, coming down of itself. The distinction between these two diseases is very important, and you should be careful not to confound them together.

Internal piles, in the state which I have just described, give the patient a great deal of inconvenience; besides which, they are liable to irritate the neighbouring parts—sometimes producing the frequent desire to make water, at other times inducing spasm in the muscles which surround the membranous part of the urethra, so as to cause complete retention of urine. Internal piles in this state are liable to discharge a large quantity of blood; and hence it is that they have their name of *hæmorrhoids*. You might suppose that the blood was venous, but it is arterial. Piles do not bleed in the early but in the advanced stage of the disease, when there is an increased determination of blood not only to the veins, but to the mucous membrane and cellular texture by which they are surrounded.

The quantity of blood lost from internal piles varies in different cases: sometimes there is a little tinge of blood when the patient goes to the water-closet, and nothing more; at other times a large quantity is lost every time he goes there, so that as much as six or eight ounces are voided daily; and then there are the usual consequences of hæmorrhage —the patient is weak, his countenance blanched, and his appetite voracious. I have known cases in which the patient was in danger of becoming dropsical, in consequence of the profuse loss of blood going on for a considerable time.

Inflammation sometimes takes place in internal piles, and ends in suppuration. The patient complains of a little discharge of matter from the anus, and you find, in addition to the mucus, that there is a little yellow stain of pus on his linen; and at first you would suppose there was a common abscess about the rectum, such as produces a *fistula in ano*. But if you introduce your finger into the rectum, you feel a small orifice in one of the internal piles, and if you pass a probe with a light hand, it goes to the bottom of the abscess, which is perhaps a quarter of an inch in depth, or thereabout. The parietes of the abscess, however, are very thin and weak, easily broken down, and if the probe be not lightly introduced, it will run through them into the loose cellular texture external to the mucous membrane. The cellular texture also is very loose and yielding, offering scarcely any resistance to the probe, so that it will run in every direction; and hence it is that I have sometimes

known a small abscess or an internal pile to have been mistaken for a very long sinus. You ought to be very careful not to fall into this error, which you might easily do—nay, in all probability would do—in the first case of the kind that occurred to you, if I did not give you this caution.

I have mentioned that there is sometimes a natural cure of external piles; and I will now state how a natural cure of internal piles may take place also. Where piles of a large size protrude, completely filling up the orifice of the anus, the sphincter muscle is contracted upon them like a ligature, and causes them to become more swollen than when they were first protruded; just as a ligature on the arm makes the veins of the fore-arm and hand turgid previously to venesection. But the piles may be larger still; the sphincter muscle may contract more powerfully upon them; and then the pressure not only interferes with the return of the venous blood from the pile, but prevents the entrance of arterial blood into it. It acts as a ligature acts in a surgical operation—on a polypus of the uterus, for example. There is not a sufficient circulation in the protruded piles for them to retain their vitality; mortification takes place, sloughing follows, and thus the piles are destroyed. I have known several cases cured in this manner, and there is little or no danger in the process. I have sometimes known medical men to be alarmed at a case of this kind, confounding it with those of mortification from other causes; but the alarm is without foundation. The late Dr. Pearson, who was for a very long period of time physician to this hospital, was the physician and friend of the celebrated Mr. Horne Tooke. Many years ago, I was dining with Dr. Pearson, and after dinner he gave an account of Horne Tooke's illness. He said that he had long laboured under piles; that at last mortification had taken place; that there was no chance of his recovery; and he added, that he had that morning seen him for the last time. I remember that in the middle of this history there came a knock at the door, on which Dr. Pearson said, "Here is a messenger with an account of my poor friend's death." However, it was some other message; but by and by a messenger did arrive, saying that Horne Tooke was much the same, or a little better. It turned out, as I have been informed, that the piles sloughed off, and that from this time he never had any bad symptom. In fact, he was, if I have been rightly informed, cured of a disease which had been the misery of his life for many years preceding, and he lived for some years afterwards.

Treatment.—In considering the treatment of piles, we will first suppose that you are consulted when the disease is in its earliest stage. The patient complains of a sense of heat and itching about the anus, and perhaps there is already a slight protrusion of the piles. You may cure him, in general, by a very simple process. Keep the bowels gently

open; take care that he is not costive on the one hand, or violently purged on the other. The best aperient for this case is the following:—One ounce and a half of *confectio sennæ*, half an ounce of *sulphur precipitatum*, and then *mel rosæ*, as much as is necessary to make an electuary, and let the patient take about a tea spoonful, or what he finds necessary, of this, every evening. This is all that is wanted in many cases; but at the same time he should avoid drinking much wine; and if he be of sedentary habits, he should, if possible, alter them, and take exercise. If this should not relieve him, in addition to what I have just mentioned, let him inject half a pint of cold water, fresh from the pump, as a lavement, every morning after breakfast, and keep it up as long as he can. This will give him immediate comfort, but it requires to be persevered in for many months; and perseverance in this plan of treatment will sometimes make a cure even of very bad cases of piles. You may, if you please, add something to make the water more astringent, as alum, the *tinctura ferri muriatis*, or the patient may use cold lime water. A friend of mine, a practitioner at this end of the town, informed me that for many years he had used cold lime water in cases of piles, with the best result; and I have employed it in several instances lately, in which I think it has been serviceable.

There is a medicine that is very often useful in those cases where these simple expedients fail, namely, the *confectio piperis composita*, which is similar to what was once very celebrated as Ward's paste. It is composed of black pepper, fennel seeds, elecampane, and honey; and the dose is a piece of the size of a nutmeg three times a day. It is like eating coarse gingerbread; it may be a little disagreeable to be taken, but still it may be taken easily enough; and the patient must persevere in its use for a considerable time. Very severe cases of piles are sometimes cured by it. A lady came to me with one of the worst cases of this disease that I ever saw: the piles were so large, and protruded so constantly, that I did not think there was any chance of curing her, except by the operation to be hereafter described, and I advised her to submit to it. She said the piles made her miserable, and she should be very glad to be cured on any terms; but she was compelled to pay a visit in the country, which would render it necessary to delay it for a month. I thought the delay for a month could not hurt her, and under these circumstances I recommended her to give Ward's paste a trial, and see what it would do for her. I heard nothing more of her for six or eight weeks, when she came back, and said she was happy to inform me that she had taken the paste regularly, and was now quite well. It is of no use to take this remedy for a week, a fortnight, or a month; it must be persevered in for two, three, or four months.

How does the Ward's paste operate? I know a case in which a patient, labouring under stricture of the rectum, had indiscreetly taken

an immense quantity of Ward's paste, and in which the colon was found quite full of it after death. It is evident, that, except any small portion which may be digested, the Ward's paste passes into the colon, and that it must become blended with the fæces; and I suspect that thus coming in contact with the piles, it acts upon them as a local application; much as *vinum opii* would act upon the vessels of the conjunctiva in chronic ophthalmia.

In confirmation of this view of the *modus operandi* of Ward's paste, I may mention an observation of the late Sir Everard Home. He had a patient labouring under piles, and he recommended him to take Ward's paste. The patient, little thinking that something put into the stomach was to cure disease in the rectum, crammed as much as he could bear of it up the rectum. I dare say it gave him a great deal of inconvenience, but, as Sir Everard Home reported, it cured him; and Sir Everard said that since then he had used it as a local application in some other cases, with manifest advantage.

I mentioned that a patient with stricture of the rectum, had indiscreetly taken a large quantity of Ward's paste, and that the remains of it were found distending the colon after death. I recall your attention to this circumstance now, because it will serve to impress upon your minds, the necessity of always giving the patient some gentle aperient, occasionally, at the time that the Ward's paste is being taken. This is not the only medicine of this description which may be used in cases of piles. Cubebs pepper, a scruple three times a day, may be given with advantage; it operates, I suppose, in the same manner as Ward's paste. In some cases of this disease, where there is a great deal of irritation, the patient will derive benefit from copaiva combined with caustic alkali; half a drachm of balsam of copaiva, with fifteen drops of *liquor potassæ*, may be rubbed down with two or three drachms of mucilage and cinnamon water, and taken three times a day. This answers a very good purpose, soothing the piles, and keeping the bowels gently open at the same time.

If you are called to a patient when the external piles are inflamed and swollen, your best way is to make him remain quiet in the horizontal posture, which takes the weight of the column of blood off the piles. You may, if you please, apply leeches in the neighbourhood, but not on the piles themselves, for the leech-bites will cause them to become inflamed, and to fester; or, if the piles be much distended, you may puncture them with a needle. Acupuncture, on the whole, relieves the patient more than the application of leeches; and there are these advantages in it, that the puncture of the needle does not cause the piles to fester, and that the relief is immediate. By puncturing them in several places you let out a large quantity of venous blood, and the benefit arising from this is great. Besides this, you may keep a piece of rag

constantly applied to the part, wetted with some cooling lotion; and the patient should take some gentle aperient; active purgatives being avoided.

When internal piles are inflamed, swollen, and protruded, you should try first of all to push them back into the gut. Take a cambric handkerchief, or a soft old linen rag, squeeze out the blood from the piles, and, if you can return them into the bowel, it is so much the better; it will relieve the patient very considerably. But if you cannot push them up, or if when pushed up they immediately come down again, you should then keep the parts wet with a rag bathed with a cooling lotion; let the patient remain in the horizontal posture, and keep the bowels gently open, without purging. Here also, as in the case of external piles, the patient will derive much benefit from acupuncture in several places. Punctures made with a needle, neither on this or any other occasion, so far as I know, occasion inflammation or any other inconvenience; they evacuate the blood, relieve the tension and swelling, and do a great deal of good without any harm.

The observations which I have now made relate to the treatment of piles under ordinary circumstances. In more aggravated forms of the disease the patient must be relieved by other methods; but I must defer the consideration of the operation for piles till the next lecture.

[*Lond. Med. Gazette, March*, 1835.

REVIEW.

Admonere voluimus, non mordere.——
Sunt bona; sunt quædam mediocria, sunt mala plura.

Application of the Physiological Doctrine to Surgery. By L. J. Begin, M. D. Ex-Surgeon Aid-Major to the Military Hospital of Instruction of Metz, &c. &c. *Translated from the French.* By Wm. Sims Reynolds, M. D. p.p. xxvi. and 227. Charleston, 1835.

It may be affirmed with truth, that no work ever contributed so much to the improvement of surgical pathology, as John Hunter's treatise on the blood and inflammation. It completely revolutionized the science, rescued surgery from the degraded state in which it had been previously involved, and in creating for it a new destiny, laid the foundation for the immense improvements it has undergone in more modern times. But although the labours of Hunter achieved so much, they could not accomplish every thing. No one individual, perhaps, at that period, could have enriched science with so valuable a treasure; but the knowledge of minute structure, and of the laws of the living economy, was then too limited and imperfect, to conduct to an acquaintance with those important general principles which, since the time of Bichat, have so greatly fertilized every branch of medical science. What it was not allowed John Hunter to accomplish, therefore, remained to be achieved under a more favourable concurrence of circumstances; and although the work is not yet completed, important additions have been made to it within the last thirty years, and in these contributions, no class of men have borne a more conspicuous part, than those who have committed the egregious sin, of arrogating to themselves the title of physicians of the *physiological school of medicine.* With Broussais at their head, they have not hesitated to assail the very strong holds of previous doctrines, and although, in the fervour of their zeal for the subversion of pre-existing errors, they have themselves promulgated many others, it must be confessed, that they have at the same time established many important truths, developed new principles, and made additions to medical science, which must entitle them to the lasting gratitude of its cultivators. Medical pathology and therapeutics have been most enriched by their labours; but surgical pathology has likewise experienced their ameliorating influence. They have established certain broad and general principles, which are equally applicable to both departments of the healing art, and no one has manifested more skill and ability in rendering them

contributive to the improvement of surgery, than the author of the treatise now under consideration.

Some idea may be formed of the plan and objects proposed by M. Begin, in the present treatise, by the following exposition of the order he has adopted in the disposition of his materials.

"It appears to me agreeable to divide surgical diseases into two grand classes, the one to comprehend the acute lesions, and the other the chronic affections. Among the first, I arrange those diseases which appear rapidly, and which have a tendency to run their course in a very short time: such are wounds, fractures, contusions, and violent inflammations. It belongs less to me to examine those lesions, in relation to their etiology, and the mechanical operations which they require, than with respect to the local and general affections of which they are the source, the influence which they exert upon the principal viscera, and the medicinal remedies, internal or external, by which they may be counteracted. Such are the subjects which are treated of, in the first five chapters of the work. I have afterwards collected under the title of chronic surgical lesions, all those which succeeding to the former, or which developed by other causes, have a prolonged, and as it were, indefinite existence. I have endeavoured to trace back as far as the vital lesion which provokes and keeps up the most important affections of this kind, in order to establish on solid foundations, both the curative indications which they present, and the treatment the most proper to combat them. After having examined the sympathetic influence exercised by chronic surgical diseases, whether on the whole of the animal organization, or especially on different parts of the body, it has been easy for me to point out the means that should be employed to remove these secondary affections, and show in what should consist, the preparation which the patients should undergo before performing great operations. But having spoken in the first chapter, of the effects of these operations themselves, and exposed the treatment which those operated upon should claim, the sufficiently extended circle of ideas which I proposed to myself to develope, was finished."

The first chapter is appropriated to the consideration of the "local affections produced by acute surgical lesions." It embraces the general discussion of the laws of inflammation and its consequences. It supposes the previous action of an irritating cause upon the tissues which are its seat, which determines the acceleration of the local organic movements or irritation. The irritation determines an afflux of fluids, engorgement of the capillaries, the passage of the red globules of the blood into the canals which do not admit them in the normal state,—swelling, redness, heat and pain. If the acceleration be of short duration, the fluids are not yet combined with the organic structure, and the former can be removed by soaking and washing after death. On the

contrary, where it has continued some time, the blood globules combine with the parenchyma of the part affected, so as to constitute an integral portion of it, and cannot be detached from it by mechanical means. The first condition has been denominated congestion: the second, inflammation—a distinction to which too much importance should not be attached.

Irritations developed in a part, may terminate, in health, in the destruction and death of the part, or in the slow degeneration and complete disorganization of the affected tissues. The first result may be accomplished by the subsidence of the irritation, or by the secretion of a fluid, and the development of suppuration. The second effect takes place, because the parts are unable to sustain the excess of action. The last is produced by a modification of nutrition, which changes the physical character of the parenchyma, and developes masses within it, possessing various heterogeneous properties.

Wounds inflicted upon the living structures may produce any or all of these effects; hence the doctrines of irritation and inflammation furnish the proper guide in the treatment of all such affections.

In the second chapter, which treats of "the local treatment of acute surgical diseases," we find some very just reflections. The author, speaking of general blood-letting, local applications, anodynes, and resolutives, represents that they prove salutary by diminishing the quantity of blood, which becomes a powerful secondary cause of augmenting pain and irritation, when it penetrates in abundance parts already stimulated; by rendering this fluid more serous, and suspending the introduction of the nutritive materials which serve to regenerate it; thus rendering it less exciting and hurtful to the irritated organs, than it would be, if rich in nutritive materials: and, lastly, by relaxing the whole organization, diminishing the stimulation of the principal viscera, rendering the sympathies less active, and preventing the development of those serious affections, of which they are the source—p. 37.

He asks the question, if the local bleedings which are so useful in the more advanced stages, have the same efficacy in the first moments which follow the infliction of the wound, and before inflammatory action has commenced? Although no preternatural engorgement yet exists, he thinks that leeches applied to the part tend to prevent local congestion, that their bites allow the blood to flow away in proportion as it is determined to the part by irritation, and in this manner prevent the capillary system from becoming engorged to any extent, and occasion "the phlogosis to miscarry, in a manner, before birth." These means, however, must not be abused. In simple and superficial affections, topical emollients and resolutives are all that are required. A weak solution of acetate of lead, or cold water, long continued, diminish directly the stimulation and pain of the injured parts. Compression is highly commended for its efficacy in preventing inflammatory fluxions, and dimi-

nishing their violence. It brings together the contused and distended parts, diminishes the capacity of the vessels, and lessens the liability to inflammation. It should extend from the portion of the member most distant from the body, to above the wounded part. Topical applications of a solution of muriate of soda, wine, camphorated spirits, &c. are condemned. Cold water is considered the most simple and salutary means of this kind. It has been highly extolled by Lombard and Percy, and M. Begin remarks, that in gun-shot wounds of the hands, or in the neighbourhood of the articulations, he has employed it often, and always with success. The author admits the advantages of making incisions, with the object of dividing the aponeurosis surrounding members wounded with fire arms, or sharp pointed instruments.

Much stress is laid on the importance of watching, with the greatest vigilance, the development of inflammation after surgical operations, and meeting it by decisive antiphlogistic treatment. If, in spite of the rational employment of the means most strongly indicated, pain, redness, and swelling become intense in the wounded parts, recourse must be again had to sanguineous evacuations. But at this time, he thinks general bleedings are less suitable, than those which abstract blood directly from the affected capillaries. The former are only proper where the subject is strong and plethoric, and where the pulse is full, large, and jerking. Local bleedings empty and carry off the blood which tends to increase the stimulation, and keep the inflammation in proper bounds: they have been justly styled by M. Gama, "regulators of local inflammation."

To obtain the good effects of leeches, they should be applied to the affected part when the skin is not inflamed, or as near to it as possible After the first application, which should be proportionate to the violence and extent of the disease, it will be best to repeat a small number of them at short intervals. Used in this manner, they have been found to produce a more salutary effect, than when a great number are applied at each time. The author thinks, that the duration of the application ought to be prolonged, and that instead of putting on the whole number at once, only a part should be applied at first, and as soon as one fills and drops, another should be made to supply its place. To these means must be added fomentations, cataplasms, baths, abstinence from solid aliment and animal broths; the use of acidulated drinks, mucilaginous clysters, &c. Should all this not succeed, revulsives to the alimentary canal, by means of purgatives, or to the skin by blisters, must be called into requisition. Care must be taken, however, not to resort to these means until evacuations have produced a salutary disengorgement, and a great diminution of the violence of the inflammation.

These remarks are followed by some very valuable reflections, intended as an application of the principles detailed, to the prevention of

the serious consequences which so often follow wounds and surgical operations upon particular parts, in which it is shewn, that the bad success often experienced under such circumstances, is altogether owing to a neglect of antiphlogistics, and that many cases generally supposed to require amputation, may be effectually cured by a properly directed antiphlogistic treatment. These remarks are highly valuable, and deserve to be meditated by every surgeon.

The third chapter considers "the sympathetic phenomena determined by acute surgical lesions."

All active irritations of the external parts determine more or less sympathetic disturbance in the functions of the principal viscera. All the organs, however, are not equally susceptible of the influence of these sympathetic irradiations. The brain, the heart, and the stomach, are those which feel them most promptly. The first receives through the nerves the impressions made on them, and reflects them towards the epigastric centre, especially towards the stomach and heart. This gives rise to symptoms of gastritis, acceleration of the pulse, &c. and the ordinary phenomena of fever. The character of the fever will vary, according to the organs that are most affected. In its most simple form, it will exhibit the phenomena of simple inflammatory fever, or as it is denominated when it is excited by the sympathetic influence of wounds, traumatic fever. This will generally be the case when the viscera are all in a healthy condition at the time the injury is inflicted. But if, on the contrary, any one of them should happen to be already labouring under preternatural irritation, the additional excitement occasioned by the wound will fall upon it, and the fever will be modified, by presenting a preponderance of those symptoms that are characteristic of irritation of that organ. Thus, if this organ be the liver, or the stomach, or both, there will be irritability of stomach, bilious vomiting, diarrhœa, yellow suffusion of the skin, and other peculiarities which belong to gastro-enteritis with implication of the hepatic function. If the individual indicate a proclivity to mucous secretions, or be subject to preternatural accumulations of suburral matter in the first passages, the gastro-enteritis will exhibit those modifications which constitute what is called mucous fever. Should the gastro-enteritis, under either of these forms, acquire greater intensity, either by the improper use of emetics, cathartics, bitters, stimulants, &c. the fever may be attended with adynamic symptoms. Finally, if the subject be nervous, very irritable, or possessed of great cerebral susceptibility, the brain and the membranes will participate in the irritation of the alimentary canal, and there will be aberration of sensibility, convulsions, delirium, sometimes melancholy,—in short, those perversions of function which characterize the ataxic state.

These principles form the very foundation of surgical pathology. Organic susceptibility determined by temperament, &c. is a fruitful source of the modifications of morbid phenomena excited by external

irritation, and is often the occasion of the peculiarities of the fever developed by such causes. Another source of these modifications is to be found in the existence of a previous irritation in one or more organs, which constitute them, as it were, "new *foci* of vitality," by which the order of the sympathies are absolutely changed. In this way we explain the diversity of sufferings experienced by individuals from injuries as nearly as possible similar, both as regards kind and degree.

Under the fourth chapter, which discusses "the treatment of internal irritations complicating surgical affections," the author lays down four leading indications.

"1st. To diminish the violence of the local inflammation.

"2nd. To combat the previous irritation of the viscera.

"3rd. To remove from the wounded all those causes capable of provoking in them internal inflammations.

"4th. To combat the internal affections which complicate external injuries, when we have not been able to prevent their development."

These several indications must be fulfilled by the employment of the means already indicated, and by an attention to hygienic regulations. The abdominal organs and the brain, as previously remarked, are the parts which most frequently suffer, and which ever of them becomes the new focus of irritation, must command attention. A strict antiphlogistic regimen, general and local bleeding, refreshing and demulcent drinks, revulsives, &c. will be demanded in all, and are the proper means to meet the fourth indication. Evacuants may also be useful; but when gastro-enteritis is predominant, they must be employed with discretion. The author has made some judicious remarks, in this chapter, on the practicability of preventing the development of traumatic fever, by a timely resort to the application of leeches to the wound—by incisions, when there are fascial constrictions, and in all cases, by the use of the ordinary local antiphlogistic treatment. This subject is of great importance in the treatment of wounds, and much of the success of the surgeon will depend upon a due attendance to it in practice.

The fifth chapter treats of the "nervous affections determined by acute surgical diseases." Several important subjects are discussed under this head: as stupor, convulsions, tetanus, and traumatic delirium. We should be pleased to offer M. Begin's views relative to these topics, but cannot do so for want of space. We shall, however, give the following observations on traumatic delirium entire, as the subject is by many not well understood:

"Traumatic delirium commences sometimes by unconnected words, and incoherent movements without motive. In the greatest number of cases, it takes complete possession of the patient. Sometimes we observe an extreme loquacity, the eyes are red and protruding, the visage animated, the movements of the limbs and body disorderly. The remembrance of the wound or the operation is entirely lost; and the nervous action is in a measure perverted, and we observe the patients disturb the affected parts, throw far off the pieces

of dressing, and bruise, and mangle their wounds without manifesting any pain. We have seen the wounded in this deplorable state, walk on their fractured limbs, and on the projecting extremities of fragments; others take a barbarous pleasure in dividing their intestines through the abdominal wounds. It is not rare, in the army, to see soldiers running over the wards thinking themselves still on the field of battle. The men who have wished to put themselves to death, tear off, with fury, the dressings which cover them, and renew their attempts at suicide. They are not sensible to the want of sleep; the patients remain vigilant as long as the excitement of their imagination is continued; the appetite is void; no excitation of the pulse; no febrile action is manifested; and the alvine evacuations take place with the same regularity as in the normal state.

The duration of this affection is very variable: sometimes it ceases in two or three hours; sometimes, on the contrary, it agitates the patients for three or four days. It terminates ordinarily all at once, either by the recovery, or death of the patient. In the first case, its cessation is announced by a general oppression, and by a sleep of eight, twelve, or a greater number of hours; after which, we find the patient in a calm state, his reason returned, sensible of the pains produced by his wounds, and asking to be dressed, likewise not having any remembrance of that which he has experienced. When death takes place, which is rare, it happens amidst the most violent agitation; we observe the forces then gradually diminish, the respiration become difficult, the pulse slow, and the vital actions become extinguished; the delirium, nevertheless, continues to the last moments. The bodies of patients who have sunk in this singular state, have not offered any constant affection, either of the brain, or the other viscera of the economy.

In considering both the temperament of individuals, who are especially exposed to traumatic delirium, and the cause likewise, and the symptoms of this affection, it becomes incontestable that it depends on a cerebral superexcitation. It constitutes a true temporary madness, produced on the one hand, by the moral commotion which the individual has experienced at the time of the wound, and on the other, by the sympathetic excitation which the wound determines in the central parts of the nervous system. Pathological physiology explains these phenomena in the most satisfactory manner: this is a new proof of the importance of its study to the surgeon.

We have combatted traumatic delirium with anodynes, antispasmodics, revulsives, and bleedings, pushed so far as to produce fainting, without these remedies having manifestly exercised any influence on the progress of this affection. M. Dupuytren, who has for a long time devoted the whole of his attention to the subject, has combatted it with the greatest success, by means of the laudanum of Sydenham, injected into the rectum, in the dose of eight or ten drops mixed in two or three ounces of mucilage. These lavements, which are easily prepared, are to be repeated three or four times in the interval of five or six hours: they suffice almost always to produce sleep and restore perfect tranquillity.*

The disease alluded to, consisting of a violent excitation of cerebral action without profound lesion of the tissue of the brain, narcotics ought to succeed better in its treatment than other soothing substances, and even bleedings.

* Annuaire medico-chirurgical des hopitaux et hospices civils de Paris, tom. 1, p. 145.

I am, nevertheless, disposed to think, that leeches placed on the back of the neck, at the same time that we cover the head with ice, and place the feet in a hot bath, or envelope them with sinapisms, will succeed as well. But as the method which we have pointed out, and which is very simple in its application, procures almost constant success, we should not substitute for it another, before we have put the same in use.

However strange it may seem, it is very remarkable, that the preparations of opium have an action more rapid and more energetic when introduced into the rectum, than when they are administered by the mouth. I have had sufficiently frequent occasions for employing this medication, and I ordinarily employ a solution of gum opium for that purpose. Injected through the anus, this substance produces sleep, without determining the general excitation which we so often observe when it is made to come in contact with the stomach."

The remainder of M. Begin's work, consisting of four chapters, treats of the following subjects:—"Local alterations determined by chronic surgical diseases." "Local treatment of chronic surgical diseases." "Sympathetic phenomena produced by external chronic irritations." "Treatment of internal irritations which complicate chronic surgical diseases."

An analysis of these chapters could not fail to demonstrate the value of our author's labours in one of the most difficult and obscure parts of surgical pathology. We are constrained, however, to forego the pleasure of such an exposition. The simple enumeration of the titles will show the importance of the themes discussed, and we may subjoin, that they have been handled with ability.

Such, then, is M. Begin's physiological doctrine, applied to surgery. It is not, as the author remarks, "so much a treatise on surgery, as an introduction to the study of that important branch of the healing art." It is a kind of first step to the vestibule of surgical science, and to him who would enter to the riches within, we can safely recommend it as a most excellent guide, to conduct him over the first stage of his ingress. It is, in short, a useful elementary work for students of surgery, and whatever may be the objections to some of the tenets of physiological medicine, there can be few to the application of its truths to surgery, here attempted to be made.

Dr. Reynolds has rendered a service to the students of our country in translating the work into English, and we sincerely hope that they will manifest their appreciation of his labours, by giving the book an attentive perusal. The translation, as far as we can judge, without a copy of the original to compare, seems to be faithfully executed. There are a few obscurities, some want of precision and propriety in the style, a little too much of the circumlocution of the French idiom, and several typographical errors of but little importance. Still, we cheerfully recommend the work to students, and the junior members of the profession, as one which they may read with much advantage; and if we mistake not, some who have grown gray in the service, might consult its pages with benefit.

COLLECTANEA.

Apis vero ratio media est; quæ materiam ex floribus agri et horti elicit, sed tamen eam propria facultate vertit et digerit.—Nov. Org.

1. *Treatment of Tinea Capitis with Tan-Water.* By CHARLES LOUDON, M.D.—I wish to lay before the profession a mode of treating *tinea capitis*, which I have found to be more successful than any that I have seen tried. It is that of simply bathing the affected parts every two hours during the day, with the strongest *tan-water* which can be procured, and continuing this treatment for at least a month. Although this local application has answered the purpose without any constitutional treatment, I by no means wish to recommend it to the exclusion of internal alterative remedies, and sound diet; both of which will manifestly act as powerful auxiliaries in promoting the cure of the local ailment. The therapeutic principle in the tan-water is probably a gallate of lime, although, from the numerous ingredients presented by the analysis of the fluid, the sanative effect may be attributed to some of the other substances held in solution.—*London Lancet, February*, 1835.

2. *Cuprum Ammoniatum in St. Vitus' Dance.*—The favourable effect of this medicine on St. Vitus' dance, I had an opportunity to observe in the cases of some individuals, girls between ten and fifteen years old. I will here give the briefest possible account of the most interesting of those cases.

O. a healthy, though delicately built girl of ten years, got, without known cause, convulsion and spastic movements in the left arm, which in a few days extended themselves over the whole body, in so much, that the patient, uninterruptedly given up to an involuntary play of the muscles, was tossed about on her bed incessantly, in an agitated manner, that was horrible to behold. Delusions of sense did not take place: consciousness was present; yet the patient could not answer the questions asked her, for over the tongue also the control of the will had ceased. The pulse was frequent, hard, tight, the respiration hurried: all secretions and excretions pretty regular. In being lifted up, the patient exhibited a weightiness as of lead, only during sleep of many hours did rest come in.

As to some other patients, with whom chorea appeared as mere nervous derangement, I ordered to O. also cupr. amm. and though the enormous intensity and the extent of the evil sometimes went nigh to weaken my confidence in this remedy, yet from the short duration of the suffering, I had on the other hand every hope. The patient, therefore, took, &c.

℞. Cupri sulph. amm. gr. tria.
Solve in aquæ distill. unciâ unâ.

Daily three times, twelve drops to be taken in half a cup of oat-gruel; every three days each dose to be increased three drops.

The result exceeded my expectation, for hardly had the child taken two glasses of the drops, when she was almost without any ailment, but some

weakness in the left arm. The convalescent now took the medicine only twice a day, and washed the as yet unserviceable arm with spirituous lotions. After eighteen grains of the medicine had been consumed, O. might be looked on as cured, and now, after six years, is still quite well. For the rest, as is usual in administered metalline remedies, the drops were increased until they excited illness, and thenceforward continually diminished.

[*Medicinische Zeitung.—Dublin Journal, March*, 1835.

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3. *Treatment of Amenorrhœa by Irritation of the Mammæ.*—Some time since Messsrs. Patterson and London, two English surgeons, published cases to prove the efficacy of leeches and excitants applied to the breasts of women, in whom the menses had been suppressed for a greater or less length of time, in the *Journal Hebdomadaire*, for December last. M. Mondiere gives an account of three cases in which a similar treatment was successful.

Case 1.—A young girl, twenty-one years of age, had not menstruated for two years; the right breast was affected with a hard glandular engorgement of the size of a walnut; a physician had treated her for six months with various kinds of remedies, and by leeches to the vulva, without success.

M. Mondiere, consulted for the swelling of the breast, ordered the frequent application of leeches in small numbers, but as the patient would not consent, he substituted frictions with iodine, cataplasms, baths, &c. At the end of two months no change; he then advised repeated suction of the nipple; the breast soon became swollen, and the nipple red and extremely sensitive; the suction was laid aside, and after some time resumed, when the patient announced that her menses had reappeared.

Case 2.—Madeleine Richard, aged twenty-one years, of a feeble constitution, menstruated first at the age of nineteen. During the first year she was regular, and each period was accompanied by pains in the head, colic, lumbar pains, &c. At length the menses were suddenly suppressed by a fright, and since then the girl's health has gradually given way. The discharge was suppressed for five months, during which the patient suffered from headache, and loss of appetite, and at the recurrence of each menstrual period, from colic, &c. At these periods also there was a slight discharge of mucus, but no blood, from the vagina.

M. Mondiere ordered a sinapism to be applied on the outer side of each breast for twenty minutes, at the period supposed from the occurrence of the above symptoms to be menstrual. The menses appeared on the following morning, but lasted only a single day. The sinapisms had produced a deep erythematous redness and a swelling which were dissipated in forty-eight hours.

The following month, the same treatment was renewed, and the menstrual discharge appeared more abundantly, and continued for three days, since when no treatment has been necessary.

M. Mondiere thinks that irritation of the mammæ, is only applicable to cases in which the amenorrhœa depends upon a deficiency of vital action in the uterus. But supposing this question decided, should we have recourse to leeches, incision, or sinapisms? Experience seems to pronounce in favour of the latter remedy. And again, should we apply only one sinapism for a lengthened period, like Mr. Patterson, or with the author, put on two mitigated sinapisms for a shorter period?—*London Lancet, February*, 1835.

4. *Menstruation at advanced periods of life.*—Having been engaged more than twenty-seven years in public practice, and not having met, till within these few years, with any cases like the following, I think it right to send them to you for insertion in your publication. I have read the Medical Gazette since its commencement, but I do not remember any similar cases recorded in that periodical.

Sarah Johnson, aged eighty-seven, was attended by me, in the year 1830, in the workhouse of the Liberty of St. Andrew's, and menstruated freely, but she in a few days after died. She complained of considerable pain. The fluid did not coagulate.

1830. Ann Lovel, aged seventy-five, a patient of mine, in the Liberty of the Rolls workhouse, was attacked, the early part of this year, with violent menorrhagia. The common remedies, inf. rosæ, acid, &c. removed the complaint. The fluid did not coagulate. This woman has continued at irregular intervals to menstruate till the date of this communication: she menstruated last week.

Mary Waller, aged sixty-seven, placed herself under my care, in the Infirmary for the parish of Islington, also in the year 1830. She was then labouring under a violent attack of menorrhagia. The fluid did not coagulate. She continued two or three years on my list, and died from exhaustion. The usual remedies relieved this woman. It struck me as curious, that in three public establishments, distant from each other, three similar cases should have occurred in my practice.

Mary Dick, aged eighty, was attacked, at her own residence, with an abundant flow of the menstrual discharge. When I saw her, she was in great pain. She said she had not been unwell for thirty years before. Opiates relieved her, and she finally got well. This case occurred in the year 1829.

Mary Brown, a nurse in Islington Infirmary, is at the present time menstruating: she is nearly eighty. She says her menses ceased when she was forty years of age. She has had the discharge now regularly for two or three years, and at monthly periods. Dovers' powder relieves her.

Ann Lovett, about eighty years of age, a bed-ridden patient, now under my care in the Infirmary of Islington, bleeds one month at the nose, and the other month menstruates regularly: the menstrual fluid does not coagulate. When the menses cease, leucorrhœa appears. She requires aperient medicines, and occasionally zinc lotions. This patient's case is similar to Lovell's, mentioned already in this paper.

A female consulted me, about two years ago, for an attack of erysipelas on the face and arms. She stated that she menstruated at seventeen, and continued to be regular till thirty years of age, when the catamenia finally disappeared. She was, at the time when under my care, forty-four.

In the year 1833, Mary Owen, aged seventy-seven, a pauper patient in the workhouse of the Liberty of the Rolls, was placed under my care, with an abundant menorrhagic discharge. She was in much pain. She had not been in such a state, she said, for these last thirty years. In a few days, however, she died.

1833, August 31st.—Charlotte Kiernan, aged seventy-one, a pauper patient in the last mentioned institution, applied to me, with abundant coloured discharge from the uterus. She was in much pain. Purgatives and opiates

relieved this female. She told me she "was in the same state that she was when at the age of twenty." This woman is now quite well.

Mrs. Gray, a nurse at one of the public institutions under my charge, aged fifty-five years, told me, that seven years ago her menses ceased, but for five years she had a monthly discharge of blood from the nipples. Her health was unimpaired.

It is the general opinion, that when aged females are attacked with this peculiar discharge, they are sure speedily to die. My experience does not warrant me in forming this conclusion, for several of my aged patients subject to this infirmity are now as well as ever they were, and very likely to continue so; nor do I think they will die, except from extreme age.

[*London Medical Gazette, Feb.* 1835.

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5. *Case of Tumour in the left Auricle.*—Susan Rowland, on her admission into the hospital the 10th of December, stated herself to be forty-five years of age, and single; that she had spit blood occasionally for five years, and had been afflicted with cough and palpitation for the last five months. She was anasarcous, had a livid countenance, there was dyspnœa, orthopnœa, decubitus only on the left side, fainting, small pulse, throbbing of the jugulars, expectoration of blood (sometimes in small globules,) crepitation in the lower lobe of the right lung, slight bronchophony; percussion dull.

Slight increase of impulse in the heart—sounds peculiar; between the first and second sound there is heard a supplementary one, which it is difficult to describe, but it suggests the impression of some obstruction in the aorta or in the mitral valve.

The patient speedily became worse: nights disturbed; more anasarca and orthopnœa, under which she rapidly sunk.

The sounds of the heart altered slightly a short time previous to her decease, the additional sound appearing to run more into the second, whilst originally it seemed to have been more closely connected with the first.

Post-mortem appearances.—Pulmonary apoplexy at the base and at the apex of the right lung.

Heart.—Right auricle and ventricle much dilated. In the left auricle, a tumour, as large as an egg, attached by a pedicle to the inner surface of that cavity, just below the opening of the pulmonary veins, and at the point of the fossa ovalis. The tumour was covered by a thin, smooth, shining membrane, a prolongation of that of the lining membrane of the auricle, which it in every respect resembled, and which gave to the pedicle (about the size of a quill,) a degree of strength and resistance that enabled it to sustain the heart when raised by grasping the tumour.

The tumor felt solid, like spleen, when cut; its section presented a firm gelatinous substance, of uniform appearance, of a deep red colour, not unlike recently coagulated blood, but as if contained in a fine cellular tissue.* On being for some hours exposed to the atmosphere, the investing membrane having become somewhat dry, blood-vessels of an arborescent form were perceptible therein, very similar to the appearance of the investing membrane of the chick as it leaves the shell.—*Ib. March*, 1835.

* The writer of this account regrets not having had an opportunity of ascertaining by maceration what was the structure of this tumor.

6. *Diagnostic Symptom in Peritonitis.*—A paper was read at the last meeting, by Dr. Bright, of Guy's Hospital, the chief object of which was to point out a symptom occasionally occurring in inflammatory attacks of the peritoneum, and of importance as diagnostic of particular changes in that membrane. He stated, that when adhesion had taken place between the peritoneum lining, the parietes of the abdomen, and the peritoneum covering any portion of the included viscera, a peculiar sensation might be perceived by the physician who placed his hand over the part; which varied from "the crepitus yielded by emphysema, to the sensation produced by bending new leather in the hand." Four cases were detailed in which this symptom had existed, and by it the existence of such adhesions had been detected during life; and the post-mortem examination had proved the correctness of the diagnosis. Three of them were cases of ascites, two of which had survived the operation of paracentesis several years. One was a case of ovarian dropsy, in which the patient had refused the relief which had been proposed by paracentesis.

Dr. Bright had seen other cases in which the same symptom had been observed, but the health of the patients having been re-established, the adhesion could only be matter of conjecture.

The paper afterwards proceeded to the description of several morbid changes occasionally observed in the peritoneum, which were illustrated by some cases and observations.—*Ib.*

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7. *Preparation and employment of Aconitine.* By Dr. Turnbull.—We have made several attempts to obtain aconitine from the Parisian chemists, for the purpose of employing it in medicine, but have never hitherto succeeded. It is now, however, prepared in town, and may be had in sufficient quantity for present use, by those practitioners who may wish to make trial of its properties. We have contrived several processes for obtaining it, two of which shall now be given: the first is the easier to manipulate, but the second yields a much purer result.

A quantity of the fresh root of the aconitum Napellus must be procured, and care should be taken that it be sound, and that the root be that of monkshood; for sometimes other roots are sold for it. Let it be carefully and cautiously dried, and then reduced to powder; this latter operation is not unattended by danger, especially if a part of the fine dust which rises from it be inhaled. One part by weight of the powder, and two parts by measure of strong alcohol, are to be digested together in a gentle heat for seven days, and the tincture, while warm, is to be filtered. It is then to be reduced to the consistence of an extract by careful evaporation, at a low and well-regulated temperature; the object of this, is to prevent the destruction or expulsion of the active principle, which would very probably ensue, if the temperature employed were higher than barely sufficient to carry off the alcohol. To the extract thus prepared, liquid ammonia is to be added, drop by drop, and mixed well with it, to precipitate the alcaloid; and in this part of the process, care must be taken that too much be not added, as in some instances the product appears to have been decomposed by inattention to this circumstance. It is difficult to give a precise rule as to the quantity; but enough will have been added, if the extract give out the odour of ammonia, when stirred.

The mass now consists of impure aconitine, mixed up with a quantity of extractive and other matters, soluble in water; and it may be taken up either with boiling alcohol, or sulphuric ether; or the soluble matter may be removed by repeated washings with small quantities of cold water, which will leave the aconitine. This latter process, is the one we have generally employed, and is performed by pouring a little water on the extract, and mixing them carefully together, then allowing the undissolved part to subside, pouring off the fluid, and repeating the operation, as long as any soluble matter is taken up; a quantity of light brown or gray powder is left, which may be purified by subsequent solution in alcohol. This powder contains the active properties of the aconite, in a high degree of concentration. A grain of it was dissolved in a dram of alcohol; and twenty drops of the solution put into the mouth of a guinea-pig, occasioned death in a few minutes. Other experiments have been performed; all of which prove the extreme energy of the substance.

The second process consists in dissolving the alcoholic extract, prepared as before, without the addition of the ammonia, in as much cold water as will take it up, and carefully decanting the solution from the insoluble part, and then filtering it. To the filtered solution, liquid ammonia is to be added, drop by drop, as long as it occasions any precipitation. When the precipitate has subsided, the supernatant fluid should be carefully poured away, or drawn off by means of a syphon; and after the precipitate has been deprived of as much of the fluid as possible, it should be purified by a sufficient number of washings with small quantities of cold water, and then carefully dried. The product obtained by this process is white.

The aconitine is possessed of an action similar, in some respects at least, to that of Delphinia. When a small quantity of it, either made into an ointment or dissolved in alcohol, is rubbed for a minute or two upon the skin, a sensation of heat and prickling is experienced; to this succeeds a feeling of numbness and constriction in the part, as if a heavy weight was laid upon it, or as if the skin were drawn together, by the powerful and involuntary contraction of the muscles beneath. This effect lasts from two or three to twelve, or more hours, according to the quantity rubbed in. So small a portion as the one-hundredth part of a grain, has produced a sensation that has continued a whole day; but the alcaloid in this instance was in a high degree of purity.

The action of the Aconitine upon the cutaneous vessels, appears to be less than that of either Veretria or Delphinia; for in no case hitherto observed, has it produced a greater degree of vascular excitement than might easily be accounted for by the friction itself; and in one instance where the Veretria ointment did occasion irritation, the aconitine has been employed without giving rise to any.

The diseases in which I have chiefly employed the aconitine externally, are tic douloureux and neuralgic affections generally, and in gouty and rheumatic cases; and its success has fully answered the anticipations that had been formed of its utility. I have employed it in the form of solution in alcohol, in the proportion of one or more grains to the dram, and in ointment, made according to the following prescription:—

℞. aconitinæ, gr. ii. alcohol, gtt. vi. tere optime et adde, axung, ʒ i. ut fiat unguent.

The object of adding the alcohol, is to prevent the aconitine from forming

a thick compound with part of the lard, which renders it difficult to make a proper ointment.

The proportion of the alcaloid in this prescription will, in general, be sufficient to begin with, but it may be augmented to four or five grains to the dram, if necessary; and in one case of tic douloureux of unusual severity, I prescribed as much as eight grains to the dram, with the most marked benefit. The best manner of applying the ointment, is simply to rub a small part of it over the whole seat of the affection, till the pain be either for the time removed, or until the full effect upon the cutaneous nerves above described be brought about; and the friction should be repeated three or four times, or more frequently in the day, according to the effect produced upon the disease. The proportion of the aconitine ought to be increased at every second or third friction; and the same rule elsewhere laid down, in regard to the action of Veratria and Delphinia, also holds good in the present instance, namely, that unless the friction occasion a full development of the peculiar impressions caused by the aconitine when rubbed on the skin, no benefit whatever is to be looked for from its employment. It is almost needless to remark, that an application of such activity should not be resorted to, if there be the slightest abrasion of the surface of the skin, and that it should be carefully kept from coming in contact with any of the mucous membranes.

The next preparation that requires notice, is the ammoniated extract of aconite; this is probably the best appellation for the substance, although it be in reality a mixture of all the active principles, along with extractive and other matters. It is made by evaporating very carefully, and at a low temperature, the tincture of the dried root of the plant, prepared as already directed in the process for obtaining the aconitine, to the consistence of an extract. To every dram of this, eight or ten drops of liquor ammoniæ should be added; and after the mixture has stood a short time in a very gentle heat, to drive off the excess of ammonia, it is to be used in the form of ointment, according to the following prescription:—

℞. extract, aconit. ammon. ʒ i. axung. ʒ iii. M. ut fiat unguent.

This, from its dark colour, may be less agreeable application than the aconitine ointment; but appears to me, to be at least as efficacious, and it has the advantage of being easily and cheaply prepared: and on these accounts, it is better suited for hospital practice. The proportion of the extract may be increased two or three fold according to circumstances.

When this ointment is rubbed upon the skin, it occasions sensations in the part, similar to those which are produced by the aconitine ointment; they are however, rather more pungent in their character; and this probably arises from the extract containing what is called the acrid principle of the plant, as well as the alcaloid itself; and it is absolutely necessary that with this preparation also, these sensations should be induced, in order to its having a full effect on the disease for which it is applied.

In the report of the preceding case, it might be inferred that the discovery of the properties of the aconitine, when applied externally, was due to Dr. Roots; but in justice to him, I must state that the report was not drawn up by him, and that he has in the most handsome manner disclaimed all merit in the discovery.—*London Medical and Surgical Journal, for February*, 1835.

8. *The best mode of administering Oil of Turpentine.*—A writer in the London Medical and Surgical Journal, proposes the following formula for the administration of this article.

℞. Olei terebenth. 3 iss vel 3 ij; magnes carbonat. 3 j; tere et adde, aquæ menth. sativ. ℥ v; syrup. limonis, spirit lavend. comp. aā, 3 ij.

Misce et divide in haust. iv, capt. j, ter quotidie.

This formula I have given with unvaried success for many years in gout and rheumatism, even to those who were previously disgusted by the taste and smell of turpentine, and also to those who, from *acidity*, could not retain it in any other form on their stomachs, (the violent chemical action that takes place on the admixture of turpentine and acids is familiar, though incomprehensible, to most medical men,) being the cause in the greater number of instances why it is rejected. Some time ago, you made mention of something of the kind recommended by a French writer, as a novel mode of exhibiting turpentine. Now, I beg leave to say, that the Frenchman was forestalled by a pupil of yours, who prescribed the above formula, nearly two years ago, for Mr. Midgley, an eminent chemist in the Strand, who mixed his own portion and swallowed it, and to whom your pupil refers you as his authority; and, if required, many more such references can be given.

[*London Medical and Surgical Journal, March*, 1835.

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9. *Vicarious Lactation.* By John Langley.—Not having met with a similar case to the following, during nearly twenty years practice in the metropolis, I cannot but consider it one of exceedingly rare occurrence, and such as you may probably deem worthy of professional record. It is that of a woman who during the latter months of utero-gestation, and at the period of lactation, has the axillary gland under each arm much enlarged, and secreting a profusion of milk, pouring it forth simultaneously, and probably sympathetically, every time she applies her infant to the natural source; the gland, with the accompanying distended integument, forms a tumour of the size and shape of an ordinary sized tea-cup inverted, which yields upon lateral compressions a copious discharge of milk, passing through the cuticular pores; by applying the breast-pump, I extracted a considerable quantity of fluid, having the apparent character of milk, separating into serum and curd upon the addition of acetic acid.—*Ib.*

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10. *Blue Fever of Children* (*Febris Cærulea.*) By M. Goelis of Vienna.—The disease thus named by M. Goëlis is an affection *sui generis* not hitherto described; it is not to be confounded with the *morbus cæruleus* caused by diseased heart. It is only seen in children from four to twelve months old, and most commonly among the lower classes, who, together with the ingestion of coarse farinaceous food, are subject to the mischiefs of damp unwholesome habitations. The disease always comes on by paroxysms, the children becoming suddenly blue, the respiration difficult, the pulse small, hard, and spasmodic. The paroxysm lasts for some time, disappears and returns; but the intervals daily become less, and the paroxysms finally coalesce. The skin is frequently covered with a viscid sweat, and death takes place suddenly. On dissection, the blood-vessels are found greatly congested. Apart from the febrile state which accompanies the attacks, the disease presents all the

characters of a nervous disorder; and the remedies that have succeeded the best with M. Goëlis, are the succinate of ammonia, and other antispasmodics, combined with mucilaginous medicines.

Together with these internal remedies, warm alkaline baths should be used. When we have succeeded in overcoming the spasm, a purgative of calomel or a mixture of rhubarb and magnesia should be administered.

Children are, besides, subject to a peculiar *chronic sweat*, which differs from the sweating sickness in possessing no febrile characteristics. In these cases the skin becomes bluish, and, as it were, transparent. This state can very well be combatted, according to M. Goëlis, by the administration of a slight infusion of bark with milk, and by frictions with oil of sweet almonds repeated several times a day.

[*London Medical and Surgical Journal, for March*, 1885.

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11. *Ball in the Lungs.*—This ball had penetrated the chest above the mamma, after having broken the head of the humerus. The limb was amputated at the shoulder joint, and the patient recovered speedily from the operation, but was liable to fits of dyspnœa and frequent hæmoptysis for twenty-five years after, at the end of which period he died. The ball was found behind the third intercostal space in the midst of the pulmonary tissue, which adhered in this place to the third and fourth ribs. The cavity in which the foreign body was lodged, was anfracturus, and communicated with dilated bronchial tubes.—*Dublin Journal, March*, 1835.

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12. *Sohmeyer on the Results of Re-vaccination in the Army, during the year* 1833.—The re-vaccination of the soldiers of the army and of newly entered recruits, recommended since the year 1831, has been carried on during the year 1833.

Altogether there were about forty-eight thousand four hundred and seventy-eight individuals vaccinated. Those who exhibited a cicatrix from former vaccination,

Distinctly, amounted to, .	37,286
Indistinctly, . . .	7,641
Not at all, . . .	3,551

The vaccinations performed at this time, after careful examination made during the usual period, were found to be,

Regular in their course, .	15,269
Irregular, . . .	12,203
Without effect, .	21,006

The latter were again operated upon, and

With effect, . . .	784
Without effect, . .	3,337

After vaccinating, which should be done with at least twenty punctures,—eight pustules were on an average obtained,

From 1 to 5 pustules, . .	6,586
6 to 10 do. . .	4,854
10 to 20 do. . . .	3,217
21 to 30 do. . . .	612

Of those who were vaccinated previously, and during the year 1833, with effect, there were attacked in the course of the year,

With varicella, . .	54
With varioloid, . . .	50
With genuine pock, .	20

From this estimate it will be seen, that the army medical men undertook the task of re-vaccination with great zeal, notwithstanding that they had to combat many obstacles and difficulties, partly from the short time that the recruits who entered one division of infantry later than usual in 1833, were under the control of the medical men, and partly from a deficiency in vaccine lymph, necessary for the re-vaccination of so many persons, which in many instances, as for example in the recruits of the sixth corps, paralyzed the activity of the medical officers, and prevented the extension and universality of re-vaccination which was so desirable. This want of a sufficient number of children with mature vaccine pustules, from which lymph to re-vaccinate the soldiers could be taken, obliged many surgeons not only to use dried matter preserved on bits of wood, needles, or between glasses, but to employ it after eight days had passed, and from the persons so vaccinated to re-vaccinate others.

Re-vaccination by means of old matter on covered needles, or preserved between glasses, is often without effect, when in the same persons a beautiful pock may be produced, by using the lymph fresh from another pustule.

The majority of army surgeons agree, that less satisfactory results are obtained from the use of old lymph, than from the employment of recent matter, whilst some maintain that it succeeds as well.

Touching the method of operating on these re-vaccinations, whether by puncture or incision, some adopted one plan and some another, agreeing, however, in the introduction of the matter through the epidermis. The results upon the whole was about equal in both cases, though perhaps the maturation was more perfect in adults when an incision had been made.

Now and then when an incision had been made according to Eichorn's plan, and the infection took, there appeared a comparatively small pustule, the cause being probably the deficiency of lymph to supply the incision in the skin.

Concerning the consequences of the re-vaccination of the army in 1833, it appears from the foregoing statement, that in almost a third part of those who were re-vaccinated the cow-pox ran a regular course; (in the year 1831–32, this took place in more than a third of the cases.) Although when no sensible difference of susceptibility of cow-pock was perceived by the medical officers, the re-vaccinated persons might exhibit a distinct, indistinct, or no mark at all, of the former vaccination; yet this susceptibility was generally the least, when the mark was distinct. *The vaccination of such individuals was often effective even when traces were left of his previous recovery from the small-pox.*

Such cases occurred in almost every corps, but with remarkable frequency in the second corps. From among these last cases of regular cow-pox, was lymph taken, and which was effective for the vaccination and re-vaccination of other persons. In one of these cases, a child as yet unvaccinated was cut in one arm, and matter from a soldier who had been vaccinated after having

had small-pox previously, was inserted, whilst the other arm was treated with vaccine matter from a child who had not had small-pox, and the results were similar in both arms. *In a few cases, genuine cow-pox followed vaccination, where the traces of former vaccination and also of small-pox were present.*

To a certain degree in corroboration of this, there are found amongst the cases, histories of individuals who were attacked with small-pox, and who exhibited in their persons marks of a former visitation of the same disease. Ordinarily the results of the later attempts were slight in proportion to the shortness of the time which elapsed from the former attack of cow-pox, small-pox, or varioloid. To this rule, however, there were several exceptions, as for instance, in a soldier who was vaccinated in 1832; in the year 1834 he was re-vaccinated with equal success. In another case it was repeated successfully after three weeks. The pustules produced by vaccination in most cases ran through their usual stages very regularly; now and then, however, variations were observed, in which the characteristic marks were not perceived until some days later than usual. In one case, the first insertion of matter being ineffective, a second was practised eight days afterwards, about a hand's breadth below the pit. Not only was this second successful, but the prior vaccination now took effect, and both ran their usual course together. Frequently when many pustules arose from the re-vaccination, the glands of the axilla swelled, and a blush of inflammation was observed upon the upper arm. This swelling of the axillary glands occurred sometimes in the false cow-pock.

When the vaccination failed, the cut exhibited very slight re-action in most cases, but sometimes there were red spots, or an inflamed knot; in the latter cases swelling of the axillary glands and fever were developed.

In a musketeer, in whom the marks of a former insertion were indistinct, and on whom re-vaccination took effect, the *rare phenomenon of a universal eruption of cow-pock was observed*, so that vaccine pustules arose not only when the matter had been inserted, but in other parts of the body, and the most distant from the insertion, resembled perfectly in form and progress those produced by the inserted matter. As an experiment, those other soldiers were vaccinated with matter taken from a pustule on the loins of this man, at a distance from the insertion of the matter, and in them regular cow-pock was developed, and from them was propagated to another by insertion.

An artillery man, who was vaccinated in his youth, and re-vaccinated in the year 1833 without effect, was seized somewhat later with varioloid. The eruption of thinly scattered pustules followed as usual, but somewhat more inflamed. The fever continued after the appearance of the eruption, the pock was regularly formed on the fourth day, remained the following day without change, and died off on the sixth day, leaving only one on the jaw. The head and the chest were now attacked; although the pulse was small, fever declared itself, and inflammation of the throat came on. *Eight days after this attack, a new crop of thirteen pustules appeared on the neck, on a spot where a blister had been applied.* In some who had been re-vaccinated without effect, the small-pox broke out the day after.

In such a case in which the small-pox appeared along with the twelve genuine cow-pock pustules, the latter remained stationary until the former had arrived at the first stage of maturation, with which it then ran equably the remainder of its course.

In one soldier the itch appeared immediately after vaccination, but appeared to exercise no influence on it, for after the usual time genuine pustules appeared, and proceeded regularly through their course.

How far the object of the re-vaccination, the prevention of small-pox, was attained, the foregoing details will indicate. In about three years, among the vaccinated and re-vaccinated soldiers, there have been about seventy cases of genuine and modified small-pox, and among them several who had been operated on during the year 1833. This result may, perhaps, appear unsatisfactory, and the attempted preservation ineffectual. We should take into account, however, the increasing frequency of small-pox during the latter years, especially the year 1333, when it spread nearly through the whole monarchy, compared with its occurrence, between eighteen and twenty-four years ago. Besides, in these great bodies of soldiers, there appear to be individuals who were vaccinated in their infancy, and who were attacked with natural small-pox: if, further, we consider the living together of the men, so adapted to spread the disease, the above cited results will appear so much the less surprising; the former opinion of the absolute protection of the cow-pock against the small-pox will appear overthrown by three years experience; nay even the small-pox itself does not protect the individual visited by it from a return.

Altogether the reports agree, that either the re-vaccination was conclusive in preventing small-pox, or that in the few cases which did occur, it appeared to be rendered milder. It should here be mentioned also, that during the year 1833, there occurred three hundred and twenty-five cases of small-pox in the 8th corps; one hundred and ninety-four in the 1st; ninety-seven in the 2nd; thirty-two in the third; and only two in the fourth quartal. This proportion offers an evident proof of the beneficial consequences of re-vaccination, for the frequency of the small-pox diminished always as the number of re-vaccinated increased; and in the 1st quartal the number of small-pox cases was greatest, and of re-vaccinations least.

Perhaps the success of the re-vaccination would have been more general, had not the medical officers to combat against the want of fresh lymph from children, and in so many cases found it necessary to use old matter taken from vaccinated and re-vaccinated persons. As in general, the results of this process were not so favourable in appearance as when fresh matter from children was used, so it may be questioned whether the cow-pock, so generated, possessed an equally protective power against the small-pox, with that arising from the use of lymph taken fresh from the child's arm.

The experience of the next year, it is to be hoped, will contribute not only to solve this problem, but also may be able to explain with accuracy, some of the difficulties of re-vaccination above mentioned. Finally, it remains only that I mention a case in which the cure of a nævus maternus was partly effected by re-vaccination. It was situated on the right arm, and matter was inserted into it; two pustules arose and ran a regular course, and the nævus was found to have diminished one half.

[*Berlin Medicinische Zeitung, June*, 1834.—*Ib.*

13. *Zittmann's decoction for the treatment of Syphilis.*—As this famous nostrum, which had, at one time, almost fallen into disuse, has been lately revived in Germany, with great encomiums upon its efficacy in the treatment of syphilis, and some other affections; we subjoin the recipe for preparing it, together with the directions to be observed in its administration. It will be observed, that there are two decoctions of unequal strength.

℞ Rad Sarsaparill. ℥ xii.
Concis. infund. in lebete stanneo C. aq. font. Ms. xxiv.
Sacchari aluminis, ℥ iss.*
Mercur. dulcis, ℥ ss.
Cinnabar. antim. sublimat. ʒ i.
Coque donec supersint, Ms. viij. et subfin. coct. add
Sem. Anisi.
Sem. fœnic, ā ā ℥ ss.
Fol. sennæ, ℥ iij.
Rad. Liquirit. ℥ iss.
Ebullitione decocti exorta redundatio evitetur.
Coletur. d. ad. decub. viij.
S. Decoctum fortius.

℞ Specibus residuis demio addantur,
Rad. sarsaparill. contus, ℥ vi.
Et coque C. aq. font. Ms. xxiv.
Sub. finem coct. add.
Cort. citri.
Cort. cinnam.
Cort. cardamoni. minor.
Rad. Liquirit. ā ā ʒ iij.
Colentur, ℔ xvi. d. ad. ℥ viij.
S. decoctum mitius.

The treatment is to be commenced by the administration of a cathartic of calomel and jalap. Next day, the patient should take eight ounces of the strong decoction warm, and remain in bed, to encourage perspiration. At twelve o'clock he may rise, and at one, take a pint of the weak decoction, cold. At night, before going to bed, he is take another eight ounces of the strong decoction, also cold. This course is to be continued four days in succession. On the sixth day, another cathartic is to be administered, and the decoction taken on the four following days, as before. Finally, on the eleventh day, the course is to be concluded by another cathartic. Should the cure not be complete, the entire course, or half of it, must be repeated, at an interval of eight days. Diet must be rigidly attended to, during the use of the medicine. The patient should take at noon thin soup, with two ounces of roasted mutton or veal, and two ounces of stale bread:—in the evening only two ounces of bread. On the day on which the cathartic is administered, he should be allowed only thin soups. After the cure has been completed, he should remain for some time in the house, on low diet, and return gradually to his accustomed mode of living. Chelius enjoins even a more rigid disci-

* A mixture of equal parts of sugar and alum.

pline. He confines the patient to bed during the entire treatment, and directs a full pint of the warm strong decoction, in the morning, and the same quantity of the weak in the afternoon. He only allows soup on those days on which the cathartic is administered;—on the intermediate days, the patient is confined to two ounces of meat, and the same quantity of bread. He does not think it necessary to give the third cathartic, advised above.—*Hecker's Wissenchaftlichen Annalen der gesammt. Heilkunde, Dec.* 1833.

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14. *Conjectures relative to the cause of the night paroxysm in Inflammatory Diseases.* By Professor Martini.—It is observed that, during sleep, some of the functions of organic life acquire increased energy, and that during this period, those of animal life are enfeebled in the same proportion. As, therefore, the greater number of diseases are seated in the apparatus of organic life, it follows, that this class of functions must be disturbed at night. If, on the contrary, the disease be seated in the functions of animal life, there will be no night paroxysm, but rather a tendency to remission during this period.—*Journ. des Connaissances Medico-Chirurg. Mars*, 1835.

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15. *Prophylactic against Venereal infection.*—Dr. Erdmann remarks, that if the glans penis and prepuce, be carefully washed with a strong solution of acetate of lead, after having connection with an infected female, the disease will not be communicated. A great many individuals who had adopted this precaution, entirely escaped the disease afterwards. It destroys the liability to absorption of the venereal virus, by giving rise to a hardening of the membrane.—*Græfe und Walther Journal für Chirurgie and Augenheilkunde*, 1834.

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16. A police soldier, aged 60, had been for a long time affected with obstinate cough and difficult respiration, which resisted all the means employed for relief. On examination after death, it was found, that the whole of the right lung was destroyed, and its place supplied by a sac, filled with a dark coloured fluid:—the left lung was in a state of extensive suppuration. The pleura, on both sides, was much thickened, and firmly adherent. This case, with others of a similar kind, shows that it is possible for life to be sustained, with a very small quantity of lung.—*Russ. Freund der Gesemdheit and Hecker's Wissenchaft. Annalen, August*, 1834.

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17. *Treatment of Intermittent Fever by Hunger.*—Mr. M——, practising physician at Marsanissa, in Ekatorienslaw, concludes hunger to be the best remedy for intermittent fever. He recommends a strict fast of three days, and gives his patient during this time only common water to drink, without either meat or medicine. It is sometimes, though seldom, needful to premise to this course of treatment, an emetic or an aperient. All tasting of food, even in the smallest quantity, tends to hinder the effect. After three days the patient must gradually accustom himself to food. Mr. M—— has employed this method these twenty-five years in different parts of Russia, and always found it effectual, of what kind soever the intermittent might be.

[*Dublin Journal, March*, 1835.

VARIETIES.

Professor Grant, of the London University, has just published the first part of an elementary treatise on comparative anatomy. From the high reputation of the author, and the almost unequalled popularity of his lectures on that subject, the publication of which has just been completed in the Lancet, we feel assured, that some of our enterprising publishers would be amply remunerated, for publishing an American edition of Professor Grant's Work. It is much to be regretted, that so little attention has been paid to comparative anatomy in our country; but we think this has been, in a great degree, owing to the want of a suitable manual, to direct the pursuits of those, who might otherwise be disposed to embark in this important study.

A translation of Louis' valuable Work on Phthisis, by C. Cowan, M.D. is announced for publication: and in the last No. of the Boston Medical and Surgical Journal, it is stated, that Dr. Winslow Lewis, of Boston, proposes to translate Gall on the functions of the brain, and Manec on the ligature of arteries.

At a meeting of the "Royal Academy of Medicine of Paris," held on the 17th of Febuary, 1835, Dr. Sam'l Jackson, of Philadelphia, was *unanimously* elected a foreign corresponding member.—*Boston Med. and Surg. Jour.*

We have received a printed circular, from Dr. A. Townes, of Abbeville district, South Carolina, from which we perceive, that the physicians there have organized a District Medical Society. We have before adverted to the advantage of these associations, and sincerely hope, that now the spirit is up, it will not be allowed to become extinct. Our friends of Abbeville, have our hearty good wishes for the success of their undertaking.

We have received the following publications since our last report:

The American Cyclopedia of Practical Medicine and Surgery;—a digest of Medical Literature. Edited by Isaac Hays, M.D. &c. No. vii. April, 1835. (*From the publishers.*) This number concludes the article *Anus*, commenced in the last, and terminates with the article *Apoplexy*. It is in no respect inferior to its predecessors. The next No. which will be published in July, will contain, besides other articles, the general and special anatomy of the arteries, illustrated by beautiful wood-cuts.

Catalogue of the officers and students of the University of Virginia, session of 1834-35. (*From Prof. Warner.*) The following are the number of students attending the respective medical classes: Chemistry and Materia Medica, 95; Medicine, 37; with the addition of 5 on Medical Jurisprudence; Anatomy and Surgery 40.

Eighteenth Annual Report on the state of the Asylum, (Frankfort,) for the relief of persons deprived of the use of reason. Philadelphia, 1835.

An appeal to the public, and especially the medical public, from the proceedings of the trustees of the University of Pennsylvania, vacating the chair of Materia Medica and Pharmacy. By John Redman Coxe, M.D. Philadelphia, 1835.

Eulogium on the Life and Services of Simon De Witt, Surveyor General of the State of New York, Chancellor of the University, &c. &c. &c. Delivered, by appointment, before the Albany Institute, April 23, 1835.—By T. Romeyn Beck, M.D. (*From the Author.*)

Revue Médicale Française et Etrangère, for Dec. 1834. (*In exchange.*)

Annales de la Médecine Physiologique, for Nov. 1834. (*In exchange.*)

Journal Hebdomadaire, des progrès des Sciences, et des Institutions Médicales, Nos. 51 and 52, for Dec. 1834. (*In exchange.*)

Journal des Connaissances, Médico-Chirurgicales, for February and March, 1835. (*In exchange.*)

The London Medical and Surgical Journal, (Dr. Ryan's,) parts 36 and 37, for February and March, 1835.

The London Medical Gazette, for Jan. and Feb. 1835.

The Lancet, Nos. 15 to 23, for the Jan. and Feb. 1835.

The Dublin Journal of Medical and Chemical Science, No. xviii. for December, 1834.

The American Journal of Medical Sciences, for May, 1835. (*In exchange.*)

The Boston Medical Magazine, Nos. 17 to 20, for April and May, 1835. (*In exchange.*)

The United States Medical and Surgical Journal, No. 9, for April, 1835. (*In exchange.*)

The Boston Medical and Surgical Journal, Nos. 8 to 15, for April and May, 1835. (*In exchange.*)

The Transylvania Journal of Medicine, and the Associate Sciences, for March, 1835. (*In exchange.*)

The Western Medical Gazette, No. 11, for March, 1835. (*In exchange.*)

The Western Journal of Medical and Physical Sciences, No. xxxii. for April, 1835. (*In exchange.*)

The two last periodicals are to form a matrimonial connection on the first day of July next. We wish them a fruitful conception, and a vigorous offspring.

The patrons of the Archives, who are in arrears, are requested to forward the amount of their subscription to the publishers. Printers and paper makers must be provided for.